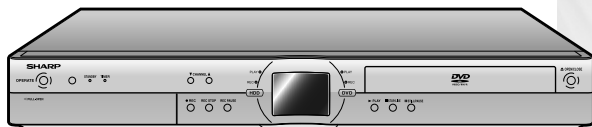# SHARP®

**ENREGISTREUR DE DVD
AVEC DISQUE DUR**

**DVD RECORDER
WITH HARD DISC**

DV-HR350F
DV-HR300F

**MODE D'EMPLOI
OPERATION MANUAL**

FRANÇAIS

ENGLISH

DVD VIDEO/RW/R

COMPACT disc DIGITAL VIDEO

COMPACT disc DIGITAL AUDIO

DOLBY DIGITAL

SPATIALIZER N-2-2™

dts DIGITAL OUT

SHOWVIEW®

• The region number for this recorder is **2**

This equipment complies with the requirements of Directives 89/336/EEC and 73/23/EEC as amended by 93/68/EEC.

Dieses Gerät entspricht den Anforderungen der EG-Richtlinien 89/336/EWG und 73/23/EWG mit Änderung 93/68/EWG.

Ce matériel répond aux exigences contenues dans les directives 89/336/CEE et 73/23/CEE modifiées par la directive 93/68/CEE.

Dit apparaat voldoet aan de eisen van de richtlijnen 89/336/EEG en 73/23/EEG, gewijzigd door 93/68/EEG.

Dette udstyr overholder kravene i direktiv nr. 89/336/EEC og 73/23/EEC med tillæg nr. 93/68/EEC.

Quest' apparecchio è conforme ai requisiti delle direttive 89/336/EEC e 73/23/EEC, come emendata dalla direttiva 93/68/EEC.

Η εγκατάσταση αυτή ανταποκρίνεται στις απαιτήσεις των οδηγιών της Ευρωπαϊκής Ενωσης 89/336/ΕΟΚ και 73/23/ΕΟΚ, όπως οι κανονισμοί αυτοί συμπληρώθηκαν από την οδηγία 93/68/ΕΟΚ.

Este equipamento obedece às exigências das directivas 89/336/CEE e 73/23/CEE, na sua versão corrigida pela directiva 93/68/CEE.

Este aparato satisface las exigencias de las Directivas 89/336/CEE y 73/23/CEE, modificadas por medio de la 93/68/CEE.

Denna utrustning uppfyller kraven enligt riktlinjerna 89/336/EEC och 73/23/EEC så som kompletteras av
93/68/EEC.

Dette produktet oppfyller betingelsene i direktivene 89/336/EEC og 73/23/EEC i endringen 93/68/EEC.

Tämä laite täyttää direktiivien 89/336/EEC ja 73/23/EEC vaatimukset, joita on muutettu direktiivillä 93/68/EEC.

OPERATION MANUAL ENGLISH

SAFETY INFORMATION

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

CAUTION:

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

AS THE LASER BEAM USED IN THIS RECORDER IS HARMFUL TO THE EYES, DO NOT ATTEMPT TO DISASSEMBLE THE CABINET. REFER SERVICING TO QUALIFIED PERSONNEL ONLY.

WARNING:

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

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

Laser Diode Properties
  Material: DVD: AlGaInP
          CD: GaAlAs
  Wave length: DVD: 658nm
              CD: 784nm
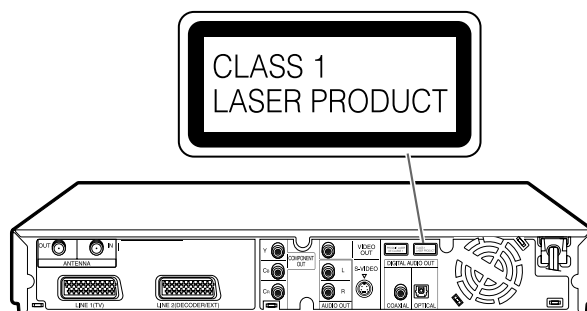 **Emission Duration: Pulse**
  Laser output: Max. DVD: 100mW
              CD: 255mW

Power Cord Protection
To avoid any malfunctions of the Recorder, and to protect against electric shock, fire or personal injury, please observe the following.
• Hold the plug firmly when connecting or disconnecting the AC power cord.
• Keep the AC power cord away from heating appliances.
• Never put any heavy object on the AC power cord.
• Do not attempt to repair or reconstruct the AC power cord in any way.
• This Recorder is classified as a CLASS 1 LASER product.
• The CLASS 1 LASER PRODUCT label is located on the rear cover.
• This product contains a low power laser device. To ensure continued safety do not remove any cover or attempt to gain access to the inside of the product. Refer all servicing to qualified personnel.

CLASS 1
LASER PRODUCT

Contents

Contents

Features

1 DVD-RW/R recording/playback with outstanding compatibility

• This Recorder is compatible with digital recording on rewritable DVD-RW discs and one-time record-able DVD-R discs. It has two recording formats: "VR (Video Recording) mode" which has a wealth of editing functions, and "Video mode" which can be played back with existing DVD players. This lets you enjoy recording and dubbing to suit your purpose.

2 High picture quality design (Used in all hard disc and DVD modes)

VBR (Variable Bit Rate) recording
• Constantly maintains optimal high picture quality by varying the bit rate (amount of video data) for each scene depending on the video content (e.g. whether movement is fast or slow).

3 A variety of hard disc ↔ DVD dubbing functions

①**High speed dubbing*[1]**
Enables high speed dubbing from hard disc to DVD so you can enjoy creating your own video library.

*[1] For high speed dubbing, use discs conforming to DVD-RW Ver. 1.1/2× or DVD-R Ver. 2.0/4×.

②**Rate conversion dubbing**
The mode can be selected from 32 levels just like recording mode. This enables recording at the optimal picture quality, given the remaining empty space on the disc.

③**Exact dubbing**
This automatically adjusts to the optimal record mode so that the material is dubbed exactly into the remaining area on the disc.

The time normally required for a programme of an hour on High Speed Dubbing to a double speed compatible disc

Recording Mode	Speed	Time Required
FINE	Approx. 2×	Approx. 30 min
SP	Approx. 4×	Approx. 15 min
LP	Approx. 8×	Approx. 7.5 min
EP	Approx. 12×	Approx. 5 min

4 "Time Shift Viewing", "Chasing Playback" and "Simultaneous Recording/Playback" —functions you can only get with a hard disc

①**Time shift viewing**
While you are watching a programme, the phone rings.… At times like this, you can pause the programme being broadcast at the press of a button, and then watch the rest of the programme at your leisure after you finish your phone call. You can also switch to the current broadcast scene just by pressing ∎STOP/LIVE button.

②**Chasing playback**
You return home earlier than expected while timer recording is in progress.… At times like this, you don't have to wait for recording to end. You can immediately view the programme from the begin-ning.

③**Simultaneous recording/playback**
Even while recording to the hard disc, you can enjoy playback of a DVD, or programmes already recorded on hard disc. You don't have to wait for recording to finish.

5 Comprehensive editing functions
(Only titles recorded on the hard disc or in VR mode on DVD-RW can be edited.)

①**Play list edit**
This lets you gather only the needed parts (i.e. a "Play List") from a recorded original video (title). You can rearrange scenes and combine them with other scenes, or rearrange titles. This is convenient when you want to dub and save only the necessary scenes and titles.

②**Chapter edit**
This lets you divide a title into chapter units during recording/playback or using the edit screen. After dividing, a list of recordings (thumbnails) can be displayed in chapter units, so you can copy, erase or dub to the play list in chapter units.

③**Erase Scene**
This lets you erase unnecessary scenes. This is convenient when you want to cut out the commer-cials in a recorded programme before dubbing.

④**Batch erasing of titles/chapters**
Titles and chapters which become unnecessary after editing can be batch erased by selecting them from the list of recordings (thumbnails).

⑤**Edit undo function*[2]**
If you mistakenly erase data during editing, this function lets you restore it to its immediately preceding state, just like "Undo" on a PC, so you can edit worry-free.

*[2] Edit undo can only be used once. It only works when "UNDO" is assigned to a coloured button (green) dis-played on the screen.

6 ## Simple operation and user-friendly design using a new remote control

① **START MENU**
Press **START MENU** button on the remote control, and display the list of main functions on the screen. After that, you can operate by using the **Cursor** buttons and **SET/ENTER** button on the remote control, so this Recorder can be used easily even by a person who is unfamiliar with operation.

② **Coloured buttons**
The remote control has coloured buttons with four different colours. Functions are displayed in four different colours on the screen, and the Recorder can be operated by directly designating these functions.

③ **Luminous buttons**
Luminous buttons are used for key control buttons on the remote control so they are easy to see in the dark.

7 ## Digital connection (i.LINK) with a digital video/audio source equipment

• The DV IN terminal allows you to capture, edit and store material from a digital camcorder equipped with a DV terminal.

8 ## MP3 file playback

• This Recorder allows you to playback MP3 files recorded on CD-RW/R.

9 ## SHOWVIEW*³ system

• The SHOWVIEW system allows you to programme your Recorder for timer recording simply by inputting the SHOWVIEW Programming number. The SHOWVIEW numbers are listed in most newspapers, television guides, and local CATV listings. Simply by inputting this SHOWVIEW number, you can programme your Recorder for timer recording, eliminating the need to input programme start time, stop time, channel, date and other information which is necessary for ordinary timer programming.

*³ SHOWVIEW is a registered trademark of Gemstar Development Corporation. The SHOWVIEW system is manufactured under licence from Gemstar Development Corporation.

Accessories
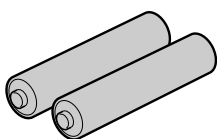
Remote control unit	Two R-03 size batteries ("AAA" size, UM/SUM-4) for the remote control unit	Video/audio cable	Round coaxial cable
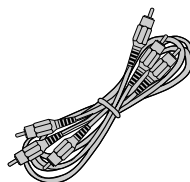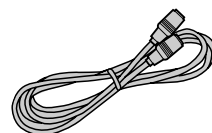
Precautions about Using This Product

Do not use at locations at high temperature.

- If you leave this equipment at a location which rises to an abnormally high temperature (like the inside of a car with the windows shut), this may cause deformation of the cabinet or malfunction. Be very careful not to allow the area abound the Recorder or discs to reach a high temperature.
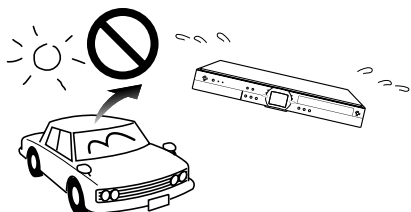
- Do not place the Recorder on any equipment which gets hot.
- Do not place at a location which is exposed to direct sunlight, or near a heater. Be careful because doing so will have an adverse effect on the cabinet and components.
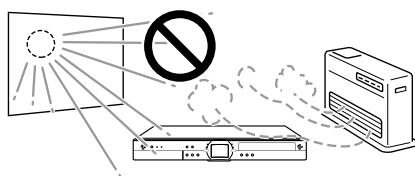
Do not remove the cabinets.

- Do not remove the Recorder cabinets. Touching parts inside the cabinet could result in electric shock and/or damage to the Recorder. For service and adjustment inside the cabinet, please contact the nearest service centre approved by Sharp.

Do not cover the fan or ventilation holes on the back of the Recorder.

- When setting up the Recorder, do not cover the fan or ventilation holes on the rear of the Recorder. This will interfere with the cooling fan and cause malfunction. Be especially careful of this point when housing the Recorder in a TV stand or AV rack.
- Do not use the Recorder on carpets, or on a bed or sofa, or wrap the Recorder in cloth or other material. This will interfere with the cooling fan and cause malfunction.

Avoid dust and smoke.

- Do not place the Recorder at a location which is unstable, subject to heavy vibration or where there is a lot of dust or tobacco smoke. Doing so may cause malfunction or accidents.

Set up the Recorder so it is horizontal.

- Do not stand the Recorder up vertically or place it upside down. Doing so will cause malfunction.

Do not place objects on the Recorder.

- Do not place any objects, such as vases or lighted candles on the top of the Recorder.
- Set up at a location where there is adequate space above the Recorder
- Do not place a TV or other heavy object on the Recorder. Doing so may result in problems like noise appearing on the screen, or deformation of the cabinet.

Keep away from magnetic objects.

- Keep the Recorder away from strong magnetic objects.

Handle the Recorder carefully.

- Do not drop the Recorder, or subject it to strong impact or vibration. Doing so will cause malfunction. Be careful when carrying or moving the Recorder.

No fingers or other objects inside

- Do not put any foreign object on the disc tray.

When moving or shipping the Recorder

- Remove the disc before wrapping the Recorder. In case you will not be using the Recorder for a while, remove the disc, and turn off the power.

Dew formation

- Dew may form on the surface of and inside the Recorder if you suddenly carry it from a cold location to a warm location, or use it in a cold room where heating has just been turned on (i.e. on a winter morning). If dew forms, let the Recorder sit with the power off until the dew disappears. Using the Recorder with dew formation present may cause malfunction.(See page **15**.)

Upkeep of cabinet

• The cabinet surface employs a lot of plastic. Do not wipe these surfaces with benzene or thinner because this may cause deterioration or paint peeling.

• Do not apply volatile liquids like insecticide to the cabinet. Also, do not allow long-term contact with materials like rubber, vinyl products or synthetic leather. Doing so may cause problems like paint peeling.
• Do not affix stickers or tape to the Recorder. Doing so may cause cabinet discolouration or damage.
• If the cabinet or front panel display gets dirty, gently wipe it off with soft cloth like flannel. If it is extremely dirty, soak a cloth in neutral detergent diluted with water, wring the cloth well, wipe, and then wipe again with a dry cloth. Using powerful cleaners may cause discolouration, deterioration or paint peeling. We recommend testing any cleaners at an inconspicuous location on the Recorder.

Electromagnetic interference

• If you use a mobile phone or other electronic equipment near the Recorder, video may be disturbed or become noisy during playback or recording due to electromagnetic interference.

Antenna

• To avoid the effects of radio interference, set up the antenna at a location away from busy roads, electric wires for train, electric transmission lines and neon signs. This is effective for preventing electric shock accidents in the unlikely event that antenna falls down.
• Do not make the antenna line unnecessarily long, or bundle it. Be careful because doing so will cause the picture to be unstable.
• The antenna is exposed to the weather, so be careful to periodically check and replace it. This will ensure a beautiful picture. Antennas are particularly susceptible to damage at locations with heavy smoke and soot, and locations exposed to sea breeze.

Hard disc (HDD)

• This Recorder records programmes onto a hard disc (HDD). The hard disc is equipped with a safety mechanism to protect data from impact, vibration and dust. However, to prevent loss of recorded data, you should be particularly careful of the following points:
  • Do not subject the Recorder to any impact.
  • Do not use at a location which is unstable or subject to vibration.
  • Do not move the Recorder while the power is on.
  • Do not unplug the power cord from the AC outlet during recording or playback. First turn power "OFF", and then unplug the power cord from the AC outlet.
  • Do not use at a location with abrupt temperature variation (variation of more than 10°C per hour).
  • The Recorder will malfunction if used at a cold location (5°C or less) or an extremely hot location (35°C or higher).
  • If you carry the Recorder from a cold location to a warm location, let the Recorder sit for a while before using it.

• In the unlikely event that the hard disc (HDD) malfunctions for some reason, you cannot replace it by yourself. If you disassemble the Recorder you will void the warranty. Please contact the nearest service centre approved by Sharp. We cannot provide compensation for data content if data is lost or not recorded.

Connected equipment

• Read carefully the "Precautions for Use" in the operation manual for any equipment connected to the Recorder.

Power conservation

• When you are finished using the Recorder, conserve power by turning power off. If you go on a trip, or otherwise will not use the Recorder for a long time, unplug the power cord from the AC outlet to ensure safety.

Requests regarding setup

• Do not cover the fan or ventilation holes on the back of the Recorder. Doing so will interfere with heat radiation and cause malfunction.

Notes about use

• The Recorder and cabinet may become a little hot, depending on the use environment when using this Recorder. This is not a malfunction.
• When unplugging the power cord (to move the Recorder, etc.), first turn off power (STANDBY indicator on the front of the Recorder lights up red) to protect the hard disc (HDD).
• When power is turned on, the fan will rotate to cool the Recorder.
• Immediately after plugging the power cord into an AC outlet, or after recovery from a power failure, the unit may fail to operate for more than ten seconds because the Recorder is performing system adjustment.

Notes about this operation manual

• In this operation manual, the terms "the Recorder", "this Recorder" or "your Recorder" refer to the "DV-HR350F/DV-HR300F DVD Recorder with Hard Disc".
• The screen displays and Recorder illustrations given in this operation manual are for explanatory purposes, and may differ somewhat from the actual screen and Recorder.

About Hard Disc (HDD)

This Recorder has a built in hard disc (abbreviated "HDD") for recording and playback. Beware of the following points when setting up and using the Recorder. Failure to observe precautions may cause damage to the HDD itself or its content, failure of the disc to operate, or recording of noise.

- Do not subject to any vibration or impact.
- Do not place at a cramped location which might block the cooling fan or ventilation port on the back of the Recorder.
- Do not place at a location with severe temperature variation.
  → If the Recorder is set up at a location with severe temperature variation, dew may form on and inside the Recorder. If the Recorder is used with internal dew formation present, this may cause HDD damage or malfunction. We recommend keeping variation in room temperature within 10˚C per hour.
- Do not place at a location with high humidity.
- Place the Recorder horizontally, never at an incline.
- When the power is on, do not unplug the power cord from the AC outlet, turn off the breaker for the area where the Recorder is set up, or move the Recorder.
  → When moving the Recorder, first turn off the power and then unplug the power cord from the AC outlet.

Recording Format

■ **HDD recording is done using the variable bit rate format for more efficient recording.**
  The following phenomena may occur.
  With the variable bit rate format, the remaining amount which can be recorded may increase or decrease relative to the display of the remaining amount of HDD space.
- When the display indicates that the remaining amount of HDD space is low, first delete unnecessary programmes, and then record with an extra margin in the amount of remaining space.
- Even if you delete a programme, the remaining amount may not increase by the amount of deleted time. When recording new video, record with an extra margin in the amount of remaining space.
- With this Recorder, part of the HDD capacity is used as a system management area.

Unrecordable Material

- This Recorder is equipped with a copy guard function that prevents recording of video software or broadcast programmes that contain a signal that restricts copying in accordance with copyrights and so forth.
- In the case a copy guard signal is contained in a source video that occurs partway through recording, recording is paused at that point. Recording resumes when the copy guard signal is no longer present, while no recordings will be made for the part where the copy prevention signal is present.

In the unlikely event that there is some problem like loss of recorded video or audio content due to a HDD malfunction, please be aware beforehand that Sharp will bear no responsibility to compensate for the content which could not be recorded or edited, for the loss of recorded or edited video, or for other related direct or indirect damages.

■ **If a power failure occurs**
- The content being recorded or timer recorded will be damaged if power failure occurs.
- The content being played back may be damaged.

■ **For important recording**
- If the HDD malfunctions, the content recorded on the HDD may be lost. If you wish to save content permanently, we recommend copying or moving the content to DVD-RW or DVD-R.

🗎 **NOTE**
- If a message indicating a HDD error is displayed (such as "CANNOT OPERATE DUE TO HDD ERROR.") and the HDD has malfunctioned, you cannot replace the HDD by yourself. If you disassemble the Recorder, the warranty will become void. Also, recovery of data is impossible. If playback is possible, re-record the recorded content onto a DVD-RW/R disc, and contact your nearest service centre approved by Sharp.

Hard Disc Operation (Recording / Playback / Time Shift Recording)

- If the Recorder is used in a cold location (a location at low temperature), the drive will only allow live viewing after power is turned on until the HDD is ready. During this time, the Recorder will not allow Time Shift Viewing, recording, display of recording lists or playback of recorded programmes. Please wait until the HDD is ready.

Initialization

- Initialization erases all video recorded on the HDD. Be sure to dub important recordings onto DVD-RW/R discs before initializing.

CPRM (control) Information

- There are 3 types of copy control signals: "Copy Freely", "Copy Once" and "Copy Never".
  "Copy Never" programmes cannot be recorded on HDD. When a "Copy Once" enabled programme is copied from HDD to DVD-RW, the video is not copied — it is moved from the HDD to the DVD-RW (i.e. the content recorded on the HDD is erased).

About DVD

Types of Discs that Can Be Used with This Recorder

- Since this Recorder is compatible with the PAL format, use discs that contain the letters "PAL" on the disc or package. **NTSC and PAL-60 signals cannot be recorded. (A black screen is shown when NTSC or PAL-60 signals are input to the external input.)**
- The following discs can be played back and recorded with this Recorder. Do not use an 8 cm (3") adapter (for CDs).
- Use discs that are compatible with standards as indicated by the presence of the following logo marks on the disc label. Playback of discs not complying with these standards is not guaranteed. In addition, image quality or sound quality is not guaranteed even if such discs are able to be played back.

Discs For Recording and Playback

Disc Type		Recording Format	Contents	Disc Size
DVD-RW **DVD RW**	• Ver. 1.1 • Ver. 1.1 (CPRM compatible)[*1] • Ver. 1.1/2× (CPRM compatible)[*1]	VR mode Video mode	Audio + Video (Movie)	12 cm (5"), single-sided/ double-sided, single layer disc 8 cm (3"), single-sided, single layer disc [*2]
DVD-R **DVD R 4.7**	• Ver. 2.0 • Ver. 2.0/4× [*3]	Video mode		

[*1] "Copy Once" broadcasts and other programmes that can be recorded only once can be recorded.
[*2] DVD-RW/R 8 cm (3") single-sided, single-layer discs can only be used for recording in the Video mode. Some discs of this type may not be able to be recorded.
[*3] Not compatible with 4× high speed dubbing. When high speed dubbing is used, the system will switch to 2×.

Discs for Playback (Playback Only)

Disc Type		Recording Format	Contents	Disc Size
DVD Video **DVD** **DVD VIDEO**	Region number ⊕ ⊕	Video mode	Audio + Video (Movie)	12 cm (5") 8 cm (3")
DVD+RW/DVD+R		Video mode (finalized disc only)	Audio + Video (Movie)	12 cm (5")
Video CD **COMPACT disc DIGITAL VIDEO**		Video CD	Audio + Video (Movie)	
Audio CD [*4] **COMPACT disc DIGITAL AUDIO**		Audio CD (CD-DA)	Audio	12 cm (5") 8 cm (3")
CD-RW/CD-R **disc Recordable** **disc ReWritable**		Audio CD (CD-DA)	Audio	
		MP3 file		
		Video CD	Audio + Video (Movie)	

[*4] This Recorder has been designed on the premise of playing back Audio CDs that comply with CD (Compact Disc) standards. CDs containing a signal for the purpose of protecting copyrights (copy control signal) may not be able to be played back with this Recorder.

- DVD video players and discs have region numbers, which dictate the regions in which a disc can be played. The region number for this product is **2**. (Discs marked **ALL** will play in any player.)
- DVD Video operations and functions may be different from the explanations in this manual and some operations may be prohibited due to disc manufacturer's setting.
- If "CANNOT OPERATE THIS FUNCTION." or "THIS OPERATION IS PROHIBITED BY THE DISC." is displayed, either the disc or Recorder is prohibiting the function. Read the disc's manual along with this manual.
- If a menu screen or operating instructions are displayed during playback of a disc, follow the operating procedure displayed.
- This Recorder conforms to the PAL colour system. Also you can play discs recorded with the NTSC system via a PAL system TV set.
- JPEG files cannot be played back.

Discs that Cannot Be Used with This Recorder

■ **The following discs are unable to be played back or are not played back properly on this Recorder. If such a disc is mistakenly played back, the speakers may be damaged due to the large volume. Never attempt to play back such discs.**

CDG, Photo CD, CD-ROM, CD-TEXT, CD-EXTRA, SVCD, SACD, PD, CDV, CVD, DVD-ROM, DVD-RAM, DVD-Audio

■ **Discs with unusual shapes cannot be played.**
- Discs with unusual shapes (heart-shaped or hexagonal discs, etc.) cannot be used. The use of such discs will cause a fault.

■ **The following DVD video discs cannot be played.**
- Discs not containing "2" or "ALL" for the region number (discs sold outside the authorized marketing area).[*5]
- Discs produced illegally.
- Discs recorded for commercial use.
  [*5] The region number for this product is 2.

■ **The following DVD-RW/R, DVD+RW/R discs cannot be played.**
- Discs on which data has not been recorded cannot be played back.
- Discs may not be played back depending on the recorder used for recording.

■ **The following Audio CD discs cannot be played.**
- Discs containing a signal for the purpose of protecting copyrights (copy control signal) may not be played back with this Recorder.
- This Recorder has been designed on the premise of playing back Audio CDs that comply with CD (Compact Disc) standards.

■ **The following CD-RW/R discs cannot be played.**
- Discs on which data has not been recorded cannot be played back.
- Non-finalized discs cannot be played back.
- Discs recorded in a format other than a Video CD/ Audio CD and MP3 file format[*6] cannot be played back.
- Discs may not be played back depending on their recording status or the status of the disc itself.
- Discs may not be played back depending on their compatibility with this Recorder or the recorder used for recording.

About DVD

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*6 About MP3 file format

MP3 files are audio data compressed in MPEG1 Audio layer 3 file format. "MP3 files" have ".mp3" as extensions. (Some files that have ".mp3" extensions or files that have not been recorded in MP3 format will produce noise or cannot be played.)

● **Playing MP3 discs**
- The MP3 files are not played in the order they were recorded.
- The maximum number of layers which can be recognized, including files and folders, is 8.
- Some multi-session discs cannot be played.
- It is recommended to record data at a lower speed as data recorded at fast speed can produce noise and may not be able to be played.
- The more folders there are, the longer the reading time.
- Depending on the folder tree, reading MP3 files can take time.
- Folder or track (file) names are limited to 8 characters. Folder or track (file) names that go over 8 characters will be abbreviated. (Certain letters or symbols in folder names or title name may not be displayed.)
- The playing time may not be correctly displayed during MP3 file playback.

● **The following files cannot be played on this Recorder.**
- Discs that have more than 257 folders or 1,000 files.
- When both Audio CD format and MP3 files format are recorded on a disc. (The disc is recognized to be an Audio CD and only tracks in the Audio CD format are played back.)

Types of Discs for Recording

- DVD-RW and DVD-R discs can be recorded with this Recorder. The recording format that can be selected may vary according to the disc version and type of disc.
- Make sure to use a disc that has the words "For Video" or "For Recording" on the disc or disc jacket for recording and playback with this Recorder.

Disc Type	Recording Format	
	VR mode	Video mode
DVD-RW Ver. 1.1 DVD-RW Ver. 1.1 (CPRM) DVD-RW Ver. 1.1/2× (CPRM)	×	×
DVD-R Ver. 2.0 DVD-R Ver. 2.0/4×	—	×

DVD-RW Discs

- DVD-RW discs are available in Ver. 1.1, Ver. 1.1 (CPRM compatible) or Ver. 1.1/2× (CPRM compatible).
- When a disc has been recorded in the VR mode, it can be recorded and erased repeatedly. Erasure also allows the recording time to be increased.
- When a disc has been recorded in the Video mode, additional recording is possible until the disc is full. The recording time does not increase[7] even if titles are erased, but if the disc is initialized (see pages **13** and **95**) full recording time is possible.
- [7] Recording time can only be increased when the last title is erased (titles cannot be erased after a disc has been finalized).

DVD-R Discs

- DVD-R discs can only be recorded in the Video mode.
- Although additional recordings can be made until the disc is full, disc space does not increase even if titles are erased (because erasure here refers only to making the titles not visible).
- Although these discs can be played back with other DVD players once they have been finalized, the discs can no longer be recorded or erased after they have been finalized.
- Discs can be additionally recorded and edited with this Recorder only until they are finalized.

Recording Formats

- There are two recording formats available with this Recorder: the VR mode and the Video mode.
- The recording format that can be selected may differ depending on the disc. Refer to the section on Types of Discs for Recording (page **10**).
- Recording in the VR mode and Video mode cannot be mixed on one disc.

VR (Video Recording) Mode

The VR mode is the basic DVD-RW recording format, and lets you enjoy the various editing functions available with this Recorder.

- When a disc has been recorded in the VR mode, it can be recorded and erased repeatedly. Erasure also allows the recording time to be increased.
- Recorded discs can only be played back with DVD-RW compatible DVD players[8].
- "Copy Once" programmes can also be recorded[9].

[8] • Although there are some cases in which the disc must be finalized, the disc can be recorded and erased after it has been finalized.
   • DVD-RW compatible DVD players have the following indication.

RW
COMPATIBLE

   DVD players with this indication have the function of being able to play back DVD-RW discs recorded in the VR mode with a DVD recorder.

[9] When using a DVD-RW Ver. 1.1 disc (CPRM compatible). Recorded programmes cannot be played back with other DVD players (including DVD-RW players) or DVD recorders not compatible with CPRM.

Video Mode

This recording format is compatible with commercially available DVD players and DVD-ROM drives.

- Discs recorded in the Video mode cannot be recorded repeatedly or their content overwritten.
- When recording in the Video mode, discs can be played back, additionally recorded and edited only with this Recorder until they are finalized. Editing functions are limited.
- Discs recorded in the Video mode can be played back with other DVD players by finalizing them after recording. (However, this does not guarantee that these discs can be played back on all DVD players.)
- Recordings onto DVD-RW/R discs using the Video mode employ a new standard approved by the DVD Forum in 2000, and compatibility with this standard is left to the discretion of the respective DVD player manufacturer. Consequently, there are some models of DVD players and DVD-ROM drives that are unable to play back DVD-RW/R discs.
- "Copy Once" programmes cannot be recorded.

Recording Time

- The recording mode that can be set varies according to the recording format. Refer to the table below for the applicable recording mode.

Recording Mode	Recordable Time	Description
FINE	About 60 minutes	When you want to record high-quality images.
SP	About 120 minutes	This is the standard recording mode.
LP	About 240 minutes	When you want to record for a long period of time with slightly lower image quality.
EP	About 360 minutes	When you want to place priority on recording time.

- Recordable time is based on the recording time when using a 4.7 GB disc. Since recording capacity varies according to the recorded material, there may be cases where there is much more disc space remaining on the disc when recording is completed.
- Refer to page **37** about the recordable times when you choose "MN" (manual) Recording mode.
- Since recording to DVD is performed using VBR (variable bit rate, refer to the section on VBR Control on page **105**) with the exception of some recording modes, recording time varies according to the material to be recorded.

- Recordable time may be shorter than that indicated above in the case of recording material of poor image quality such as broadcasts from televisions with poor reception.
- This does not guarantee the length of recording time. Actual recording time may be shorter than that indicated above depending on image quality and other aspects.
- The total of recording time and remaining time may not always agree with the recordable time of the recording mode.
- Block-like images may become conspicuous during scenes containing rapid movement due to the characteristics of digital image compression technology.

Disc Remaining Time

● **VR mode**
  - Additional recordings can be made as long as there is available space on the disc. (Additional recordings can also be made after the disc is finalized.)
  - Erasing unnecessary recordings lets you increase the remaining time on the disc. (The disc can also be erased after it has been finalized.)
  - When a Play List (see page **74**) is created, disc space will not increase even if portions of titles or titles of Play List are erased.

● **Video mode**
  - Additional recordings can be made with this Recorder provided there is available space on the disc until the disc is finalized.
  - In case you record on a DVD-RW disc, recordable time will increase if you erase the last recorded title unless you finalize the DVD-RW disc.
  - In case you record on a DVD-R disc, recordable time will not increase even if you erase titles (see page **73**). (The erase function only hides the title, it does not actually erase it. It does not actually delete the recorded contents.)

About DVD

Using the Proper Disc

Select the disc and recording format to be used according to the objective of the recording. Select the disc and recording format by referring to the table below.

Objective	Disc Used	Recording Format
• When you want to play back a recorded disc with a DVD player or DVD Video compatible PC • When you want to repeatedly record and erase a recorded disc	Recordable DVD-RW disc Ver. 1.1 or Ver. 1.1 (CPRM compatible) **DVD** R W	Video mode recording + finalization
• When you want to edit a disc recorded with this Recorder • When playing back with a DVD-RW compatible player with the following indication **RW** COMPATIBLE • When you want to repeatedly record and erase a recorded disc	Recordable DVD-RW disc Ver. 1.1 or Ver. 1.1 (CPRM compatible) **DVD** R W	VR mode recording + (finalization)
• When you want to record a "Copy Once" satellite broadcast, etc.	Recordable DVD-RW disc Ver. 1.1 (CPRM compatible) **DVD** R W	VR mode recording
• When you want to play back a recorded disc with a DVD player or DVD Video compatible PC • When not re-recording a recorded disc (when making a permanent recording or when you do not want the recording to be erased)	Recordable DVD-R disc **DVD** R 4.7	Video mode recording + finalization

Unrecordable Material

● This Recorder is equipped with a copy guard function that prevents recording of video software or broadcast programmes that contain a signal that restricts copying in accordance with copyrights and so forth.
  Example:
  • DVD videos
  • PPV (pay-per-view) broadcasts
● The proper image may not be obtained in the case a copy guard signal is contained in the images input from equipment connected to the external input jacks (LINE 1, LINE 2, LINE IN 3 or DV IN) of this Recorder.
  Example:
  • Images not output at proper brightness
  • Incorrect output of picture size and other data
  Connect such equipment directly to your TV without going through this Recorder.
● In the case a copy guard signal is contained in a source video that occurs part way through recording, recording is paused at that point. Recording resumes when the copy guard signal is no longer present, while no recordings will be made for the part where the copy prevention signal is present.

Initialization and Finalization

Initialization (Formatting)

Initialization is required when using DVD-RW discs in the Video mode. (See page 95 for details about Initialization.)

When an unused DVD-RW disc is placed in the Recorder immediately after the disc has been purchased, the Recorder is set to automatically begin initializing in the VR mode. The settings can also be changed so that discs are initialized in the Video mode (page **95**).

When using a DVD-RW disc in the Video mode without changing this setting, initialize the disc in the Video mode after first completing initialization in the VR mode (page **95**).

- Initialization causes the entire previously recorded contents of the disc to be erased.
- It takes about 1 minute to 1 minute and 30 seconds for initialization to be completed.

Allowing Discs to Be Played Back with Other DVD Players (Finalization)

Discs must always be finalized in order to play them back with another DVD player after having been recorded in the Video mode. (See page 95 for details about Finalization)

Finalize discs on which all recordings have been completed so that they can be viewed with another DVD player or a DVD Video compatible PC. Discs that are not finalized may not be able to be played back with other DVD players or DVD Video compatible PCs. (However, this does not guarantee that finalized discs can be played back on all DVD players or DVD Video compatible PCs.)

- Finalizing a DVD-R disc prevents all recording and editing of that disc.
- Although DVD-RW discs can be re-recorded by initializing even after they have been recorded in the Video mode and finalized, all previously recorded contents are erased.
- Finalization is required if a disc recorded in the VR mode cannot be played back with a DVD-RW compatible player. (Discs formatted in the VR mode can be recorded and edited even after finalization.)
- Finalization takes from several minutes to about an hour. (Processing takes longer if there is considerable available space on the disc.)

The following operations may cause malfunction.

- Operating discs recorded or edited by this Recorder in a DVD recorder or PC's DVD drive manufactured by other manufacturers.
- Using the discs in above situation again with this Recorder.
- Operating discs recorded or edited by a DVD recorder or PC's DVD drive made by other manufacturers than the one for this Recorder.

About the Contents of the Disc

Title, Chapter and Track

- DVDs are divided into "Titles" and "Chapters". If the disc has more than one movie on it, each movie would be a separate "Title". "Chapters", on the other hand, are subdivisions of titles. (See Example 1.)
- Video CDs and Audio CDs are divided into "Tracks". You can think of a "Track" as one tune on an Audio CD. (See Example 2.)

Recording on a DVD-RW/R disc

- One recording is treated as one title and the chapters will be inserted automatically every 10 minutes. You can choose the chapter interval from the following: 10 minutes, 15 minutes, 30 minutes, or off (page **84**).
- Each title, chapter and track will be numbered in order. Title, chapter and track may not be numbered in some discs.

Recording on a DVD-RW disc in VR mode

- When you pause during recording or erase the scene using edit function, chapter marks will be inserted automatically. You can also insert chapter marks at your favorite scenes (page **71**).

Recording in Video mode

- You cannot insert chapter marks at your favorite scenes.

Example 1: DVD
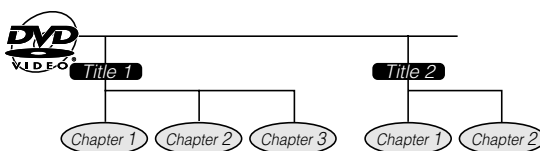
Example 2: Video CD or Audio CD

About the Contents of the Disc

Icons Used on DVD Video Disc Case

When you buy a DVD Video disc, the back of the disc case usually contains various information about the contents of the disc.

1

2 1. English 2. Chinese

DOLBY DIGITAL

2 1. English 2. Chinese

3

16:9 LB

4

2

5

1 **Audio tracks and audio formats**
DVD discs can contain up to 8 separate tracks with a different language on each. The first in the list is the original track.
This section also details the audio format of each soundtrack—Dolby Digital, DTS, MPEG etc.

Dolby Digital
A sound system developed by Dolby Laboratories Inc. that gives movie theatre ambience to audio output when the Recorder is connected to a Dolby Digital processor or amplifier.

DTS
DTS is a digital sound system developed by Digital Theater Systems for use in cinemas. This system uses 6 audio channels and provides accurate sound field positioning and realistic acoustics. (By connecting a DTS Digital Surround decoder, you can also listen to DTS Digital Surround sound.)

Linear PCM
Linear PCM is a signal recording format used for Audio CDs.
The sound on Audio CDs is recorded at 44.1 kHz with 16 bits. (On DVD discs, sound is recorded at between 48 kHz with 16 bits and 96 kHz with 24 bits.)

MPEG
MPEG Audio gives movie theatre ambience to audio output when the Recorder is connected to an MPEG Audio 5.1 channel processor or amplifier.

🗋 NOTE
• This Recorder supports 2-channel(L/R) audio and 5.1ch(Multi-channel) MPEG Audio 1/2(only when the DIGITAL AUDIO Output COAXIAL jack is used for connection). It does not support 7.1 channel MPEG Audio Version 2.0.

2 **Subtitle languages**
This indicates the kind of subtitles.

3 **Screen aspect ratio**
Movies are shot in a variety of screen modes.

4 **Camera angle**
Recorded onto some DVD discs are scenes which have been simultaneously shot from a number of different angles (the same scene is shot from the front, from the left side, from the right side, etc.).

5 **Region code**
This indicates the region code (playable region number).

The Icons Used in This Operation Manual

HDD .... Indicates the functions that can be performed for the hard disc.

DVD VIDEO .... Indicates the functions that can be performed for DVD Video discs.

DVD-RW **DVD-RW** ... Indicates the functions that can be
VR MODE VIDEO MODE performed for DVD-RW discs.
VR MODE:
• Indicates that the function will operate when recording in VR mode or playing back a disc recorded in VR mode.
VIDEO MODE:
• Indicates that the function will operate when recording in Video mode or playing back a disc recorded in Video mode.

DVD-R .... Indicates the functions that can be performed for DVD-R discs.

VIDEO CD .... Indicates the functions that can be performed for Video CDs.

AUDIO CD .... Indicates the functions that can be performed for Audio CDs.

CD-R .... Indicates the functions that can be
MP3 performed for CD-R discs in MP3 format.

CD-RW .... Indicates the functions that can be
MP3 performed for CD-RW discs in MP3 format.
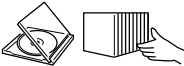
Important Information

Disc Precautions

Be Careful of Scratches and Dust

- DVD-RW and DVD-R discs are sensitive to dust, finger-prints and especially scratches. A scratched disc may not be able to be recorded, or important data recorded may not be able to be played back. Handle discs with care and store them in a safe place.

Proper Disc Storage

Place the disc in the centre of the disc case and store the case and disc upright.	
Avoid storing discs in locations subject to direct sunlight, next to heating appliances or in locations of high humidity.	
Do not drop discs or subject them to strong vibrations or impacts.	
Avoid storing discs in locations where there are large amounts of dust or locations where mold tends to grow easily.	

Handling Precautions

- If the surface is soiled, wipe gently with a soft, damp (water only) cloth. When wiping discs, always move the cloth from the centre hole toward the outer edge.

- Do not use record cleaning sprays, benzene, thinner, static electricity prevention liquids or any other solvent.
- Do not touch the surface.
- Do not stick paper or adhesive labels to the disc.
- If the playing surface of a disc is soiled or scratched, the Recorder may decide that the disc is incompatible and eject the disc tray, or it may fail to play the disc correctly. Wipe any soiling off the playing surface with a soft cloth.

Cleaning the Pick Up Lens

- Never use commercially available cleaning discs. The use of these discs can damage the lens.
- Request cleaning of the lens to the nearest service centre approved by Sharp.

Warning of Dew Formation

- Dew may form on pick up lens or disc in the following conditions:
  - Immediately after a heater has been turned on.
  - In a steamy or very humid room.
  - When the Recorder is suddenly moved from a cold environment to a warm one.
  When dew forms:
    It becomes difficult for the Recorder to read the signals on the disc and prevents the Recorder from operating properly.
  To remove dew:
    Take out the disc and leave the recorder with the power off until the dew disappears. Using the recorder with dew formation may cause malfunction.

Copyright

- Audio-visual material may consist of copyrighted works which must not be recorded without the authority of the owner of the copyright. Please refer to relevant laws in your country.
- This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property right 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.

> **Apparatus Claims of U.S. Patent Nos. 4,631,603, 4,577,216, 4,819,098 and 4,907,093 licensed for limited viewing uses only.**

- Manufactured under license from Dolby Laboratories. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories.
- "DTS" and "DTS Digital Out" are trademarks of Digital Theater Systems, Inc.
- Certain audio features of this product manufactured under a license from Desper Products, Inc. *Spatializer*® N-2-2™ and the circle-in-square device are trademarks owned by Desper Products, Inc.
- The DVD logo is a registered trademark.
- i.LINK refers to the IEEE 1394-1995 industry specification and extensions thereof. The ⚡ logo is used for products compliant with the i.LINK standard.
- **DVD** VIDEO/RW/R is a trademark.
- SHOWVIEW is a registered trademark of Gemstar Development Corporation. The SHOWVIEW System is manufactured under licence from Gemstar Development Corporation.

Cautions Regarding Recording

● **Always Make Sure to Test Record First**
- Make a test recording with a DVD-RW disc first before making any important recordings to confirm whether or not the recorded material is recorded properly.

● **Compensation for Recordings**
- In the event a recording is unable to be made due to a problem with this Recorder or a disc, or due to an external factor such as a power failure or condensation of moisture and so forth, the manufacturer is not responsible for compensation for unrecorded contents or incidental damages.

Major Components

Main Unit (Front)

To open the front door, lay your finger on this part and pull toward you.

1 OPERATE (p. **22**)
2 STANDBY indicator (p. **22**)
3 TIMER indicator (p. **40**)
4 CHANNEL ▼/▲
5 PLAY/REC indicators (for HDD) (pp. **34**, **50**)
6 PLAY/REC indicators (for DVD) (pp. **36**, **55**)
7 Disc tray (p. **35**)
8 OPEN/CLOSE (p. **35**)
9 RESET (p. **99**)
10 LINE IN 3 (p. **83**)
• AUDIO Input jacks
• VIDEO Input jack
• S-VIDEO Input jack
11 DV IN terminal (p. **81**)
12 ● REC (p. **34**)
13 REC STOP (p. **34**)
14 REC PAUSE (p. **34**)
15 HDD (p. **30**)
16 DVD (p. **30**)
17 ▶ PLAY (p. **50**)
18 ■ STOP/LIVE (pp. **32**, **50**)
19 ❚❚ STILL/PAUSE (pp. **32**, **53**)

Front Panel Display
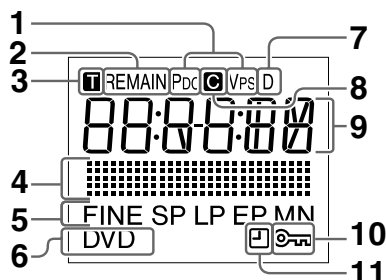
1 PDC/VPS indicator
2 Disc Remaining Time indicator (p. **29**)
3 Title indicator (p. **29**)
4 Dubbing indicator (p. **47**)
5 Recording Mode indicator (p. **34**)
6 DVD indicator (p. **20**)
7 Decoder indicator
8 Chapter indicator (p. **29**)
9 Information Display (p. **29**)
10 Tamper Proof indicator (p. **33**)
11 Simple Recording Timer indicator (p. **34**)

Main Unit (Rear)
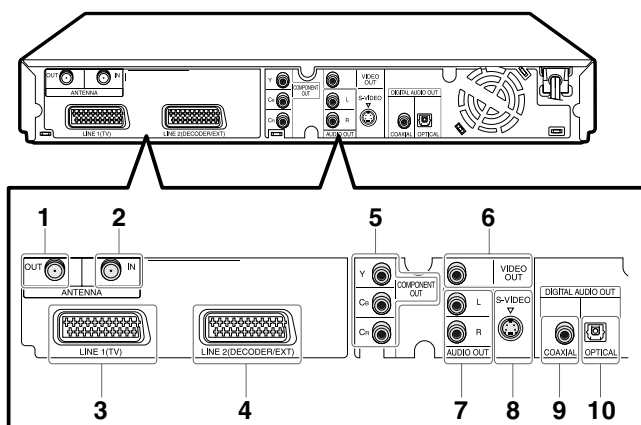
1 ANTENNA OUT jack (p. **20**)
2 ANTENNA IN jack (p. **20**)
3 21-pin Euro-SCART (LINE 1 (TV)) (p. **20**)
4 21-pin Euro-SCART (LINE 2 (DECODER/EXT)) (p. **20**)
5 COMPONENT Video Output jacks (p. **21**)
6 VIDEO Output jack (p. **21**)
7 AUDIO Output jacks (p. **79**)
8 S-VIDEO Output jack (p. **21**)
9 DIGITAL AUDIO Output COAXIAL jack (p. **79**)
10 DIGITAL AUDIO Output OPTICAL terminal (p. **79**)

Remote Control Unit

1 OPERATE (p. **22**)
2 ▲ OPEN/CLOSE (p. **35**)
3 Number buttons (pp. **19**, **39**)
4 TV/DVD (p. **20**)
5 TIMER ON/OFF (p. **40**)
6 TIME SHIFT (p. **32**)
7* START MENU (p. **24**)
8* HDD (p. **30**)
9* REC LIST/DVD TITLE (pp. **51**, **59**)
10* Cursor buttons (▲/▼/◀/▶) (pp. **22**, **24**)
11* EXIT (p. **24**)
12 Blue (A), Red (B), Green (C), Yellow (D) (p. **51**)
13* ◀◀ REV (pp. **32**, **53**, **57**)
14* ❚❚ STILL/PAUSE (pp. **32**, **53**, **57**)
15* ■ STOP/LIVE (pp. **32**, **50**, **56**)
16 ◀❚❚ F.ADV ❚❚▶, ◀◀ SKIP ▶▶❙ (pp. **53**, **56**, **57**)
17 ● REC (pp. **34**, **36**)
18 REC STOP (pp. **34**, **36**)
19 TV CONTROL buttons (p. **19**)
20 CH ▼/▲
21 DIRECT (p. **52**)
22 SHOWVIEW (p. **39**)
23 ERASE (pp. **39**, **43**)
24 DUBBING (p. **46**)
25 P IN P (p. **63**)
26 INPUT/⟲ Repeat (pp. **54**, **57**, **82**)
27* DVD (p. **30**)
28* ORIGINAL/PLAY LIST / DVD MENU
(pp. **51**, **59**, **66**)
29* SET/ENTER (pp. **22**, **24**)
30* ⟲ RETURN (p. **24**)
31* ▶ PLAY (pp. **32**, **50**, **56**)
32* ▶▶ FWD (pp. **32**, **53**, **57**)
33* ❙▶ SLOW (pp. **53**, **57**)
34 REPLAY (pp. **53**, **57**)
35 SKIP SEARCH (pp. **53**, **57**)
36 REC MODE / 🔍 ZOOM (pp. **34**, **36**, **54**, **58**)
37 REC PAUSE (pp. **34**, **36**)
38 ANGLE (p. **58**)
39 FUNCTION (p. **61**)
40 DIRECT REC TV (p. **38**)
41 CHAPTER MARK / RGB OFF
(pp. **21**, **34**, **36**, **50**, **55**)
42 AUDIO (pp. **28**, **54**, **58**)
43 SUBTITLE (p. **58**)
44 DISPLAY / BACKLIGHT (p. **29**)
45 ON SCREEN (p. **28**)
46 TAMPER PROOF (p. **33**)

📄 NOTE
• Buttons marked with "*" are made of luminous rubber for easy visibility even in the dark. (The degree of brightness will decrease as time passes.)

Major Components

Loading the Batteries

1 While pressing ⥥ down, slide the battery cover in the direction of the arrow.
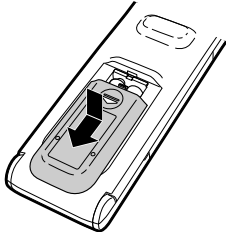
2 Load the batteries.
Load the two R-03 size batteries ("AAA" size, UM/SUM-4) supplied with the remote control unit. Make sure that the battery poles ⊕ and ⊖ are positioned as indicated.

3 Slide the battery cover in the direction of the arrow until it clicks.
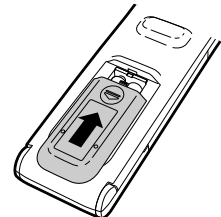
NOTE

- Do not subject the remote control unit to shock, water or excessive humidity.
- The remote control unit may not function if the Recorder's remote sensor is in direct sunlight or any other strong light.
- Incorrect use of batteries may cause them to leak or burst. Read the battery warnings and use the batteries properly.
- Do not mix old and new batteries, or mix different brands.
- Remove the batteries if you will not use the remote control unit for an extended period of time.

Operating range of remote control

Remote sensor

About 30° About 30°

Front 7m

◄ Remote control unit
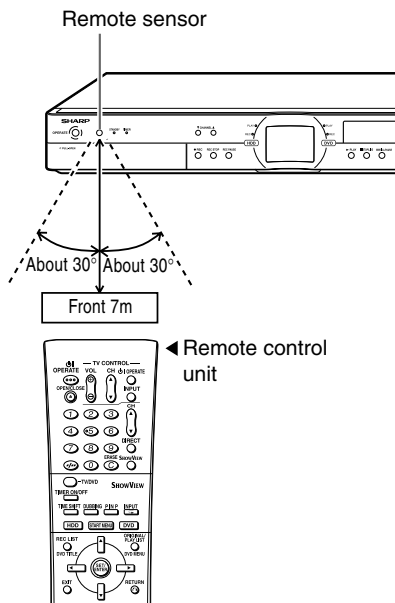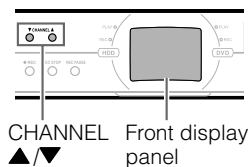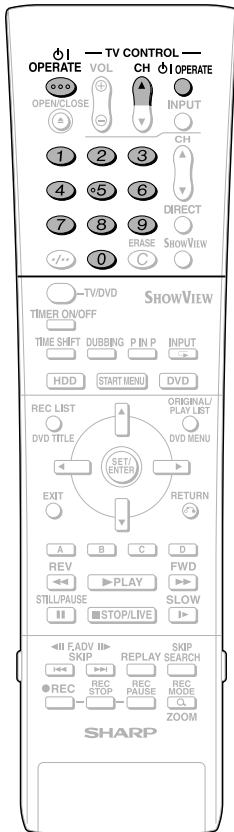
Operating a TV Using the Remote Control (Universal Remote Control)

The Universal Remote Control may operate the basic functions of 16 different types of TVs. To enter the Manufacturer's Code for your TV, follow the instructions below.

> There is no guarantee that the universal remote control will function with your TV.

Setting the Manufacturer's Code

1 **Press OPERATE and CH ▲ of TV CONTROL simultaneously.**

2 **Enter the 2-digit Manufacturer's Code with the Number buttons (Ex. 02-"0", "2") within 10 seconds after releasing OPERATE and CH ▲ of TV CONTROL.**

3 **Point the remote control unit towards the TV and then press OPERATE of TV CONTROL.**
   • If the TV turns on/off, setup was successful. If not, repeat the procedure using another code.

See the list below for the Manufacturer's Code and the buttons which work.

TV Brand	Manufacturer's Code
FERGUSON	07
GRUNDIG	06
HITACHI	13
ITT NOKIA	08
JVC	15
MITSUBISHI	16
PANASONIC 1	11
PANASONIC 2	12
PHILIPS	03
SANYO	14
SHARP 1	01
SHARP 2	02
SONY	09
THOMSON 1	04
THOMSON 2	05
TOSHIBA	10

TV function control

• TV Power: OPERATE
• TV Channel up/down: CH ▲ / ▼
• TV Volume up/down: VOL +/-
• TV-AV Selector: INPUT

☐ NOTE
• If the batteries in the remote control unit are changed, the code settings must be re-entered.
• Some brands have more than one code listed above, due to changes in the codes. In such cases, try another code to find the code that operates your TV.

CHANNEL ▲/▼   Front display panel

Setting the Remote Control Code

• Two types of remote control codes operate this Recorder: RC-1 and RC-2. If you operate this Recorder by remote control along with another SHARP DVD recorder or DVD player placed next to it simultaneously, switching the remote control code (both the Recorder and remote control) to one of the signals (RC-1 or RC-2) will let you operate only with this Recorder.
• Make sure to set the Recorder and remote control to the same remote code. You can not operate the Recorder if they are not set to the same code.

Setting the Remote Control Code of the Remote
Example: Setting the code to "RC-2".

1 **Press and hold OPERATE and 2 together for more than 5 seconds.**

2 **Press OPERATE of this Recorder to see if you can turn it on/off.**
   • If you cannot, go to step *3*.

☐ NOTE
• The remote control code of the remote becomes "RC-1" when you change the batteries.

Setting the Remote Control Code of the Recorder

3 **Press OPERATE to turn off the Recorder.**

4 **Press and hold CHANNEL ▼ and CHANNEL ▲ on the Recorder together for more than 5 seconds.**
   • Each time this operation is performed, the code of the Recorder toggles between "RC-1" and "RC-2". The front panel display changes as the code changes.
   • Press OPERATE on the remote control to see if you can turn on/off the Recorder.

If remote control does not work
Press OPERATE on the remote control and check the front panel display (RC-1 or RC-2). Set the remote control code according to the display and press OPERATE to see if you can turn on/off the Recorder.

Basic Connection

Connection Using Antenna Cables and SCART Cables

The following connection is the basic connection to watch or record TV programmes.

⚠ Important!

- Be sure to turn off and unplug from the AC outlet this Recorder and all equipment before connecting the cables.
- Read through the operation manual for the equipment to be connected.

To ANTENNA IN jack

Antenna cable (commercially available)

1

The Recorder

To ANTENNA OUT jack

To LINE 1(TV) SCART

2

3

To LINE 2 SCART

Coaxial cable (supplied)

SCART cable (commercially available)

SCART cable (commercially available)

4

To SCART input

To SCART output

To antenna input jack

Decoder or Satellite System

TV
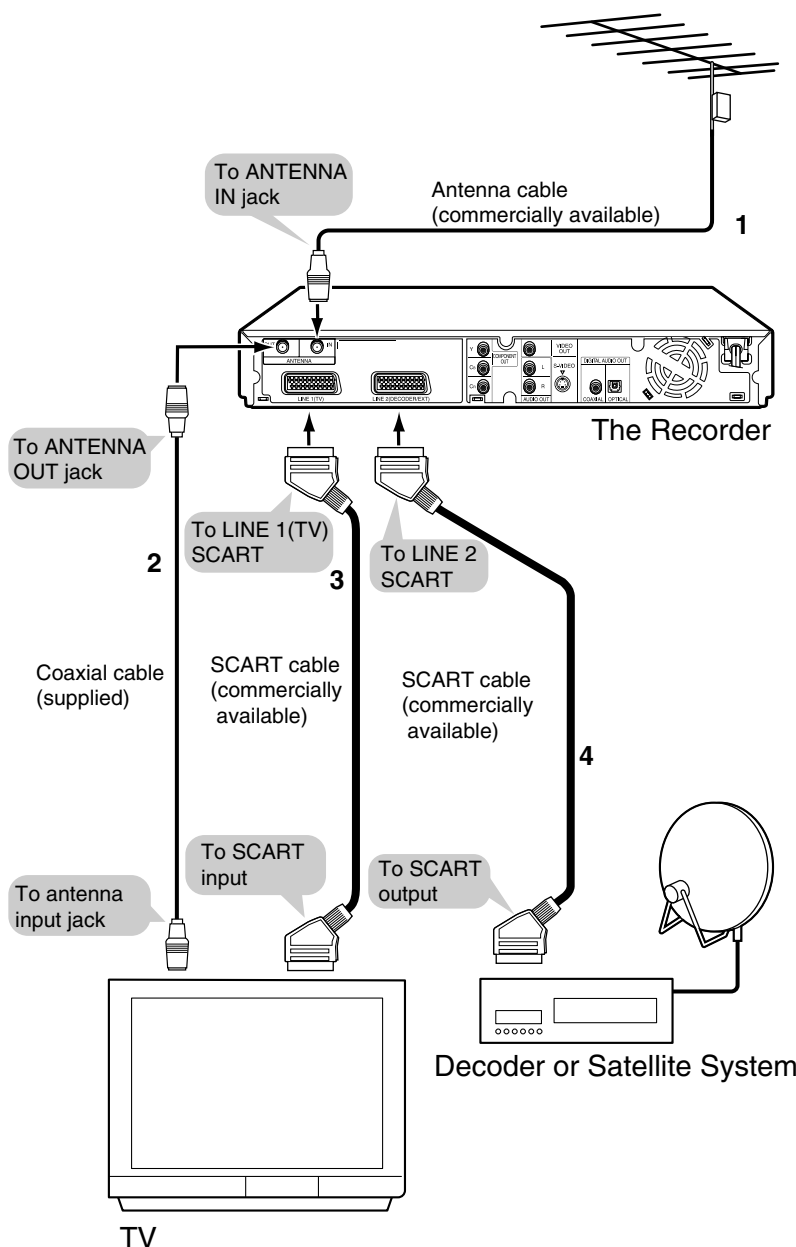
1 Connect the TV antenna cable to the ANTENNA IN jack on the rear of this Recorder.

2 Connect the ANTENNA OUT jack on the rear of this Recorder to the antenna input jack on your TV using the supplied coaxial cable.

3 Connect the LINE 1(TV) jack on the rear of this Recorder to the SCART input jack on your TV using the SCART cable (commercially available).

When connecting with your Satellite receiver or decoder

4 Connect the LINE 2(DE-CODER/EXT) jack on the rear of this Recorder to the SCART output jack on your Satellite receiver or decoder using the SCART cable (commercially available).

🖹 NOTE

- To connect using S-video or component cables, see "Using Other Types of Video Output" on page **21**.

⚠ Important!

- When connecting to your TV using SCART cable:
  When playing back HDD/DVD, the recorder side input is selected automatically. When the channel is changed at the TV side under this setting, the selection is normally changed to the reception channel, but it may not be changed for certain TV models. If this happens, press the **TV/DVD** button on the remote control.

Using Other Types of Video Output

In order to view clearer DVD images, it is recommended that you use a commercially available S-video or component video cable when connecting your TV to the video output.

TV

To video/audio input jacks — or — To S-video input jack

Video/Audio cable (supplied) S-video cable (commercially available)

To VIDEO/AUDIO output jacks To S-VIDEO output jack
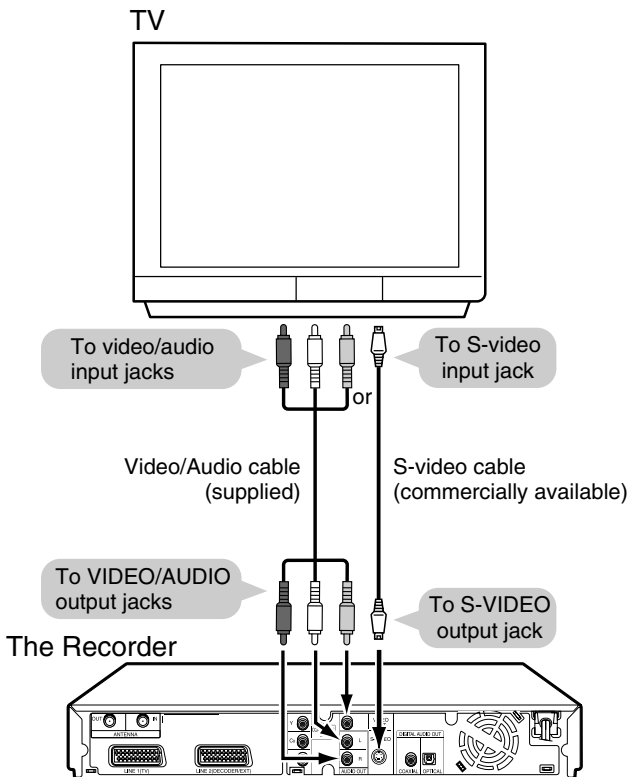
The Recorder

Connecting Using an S-video or Video Cable and Audio Cable

Connect the S-VIDEO or VIDEO Output jack on this Recorder to the S-video or video input jack on your TV using an S-video cable (commercially available) or Video/Audio cable (supplied).

⤷ NOTE
• When connecting both S-video cable and Video/Audio cable to the Recorder, the image of S-video cable is displayed.

TV

To audio input jacks Video/Audio cable (supplied)

To component input jacks

Component video cable (commercially available) To AUDIO output jacks

The Recorder

To COMPONENT OUT jacks
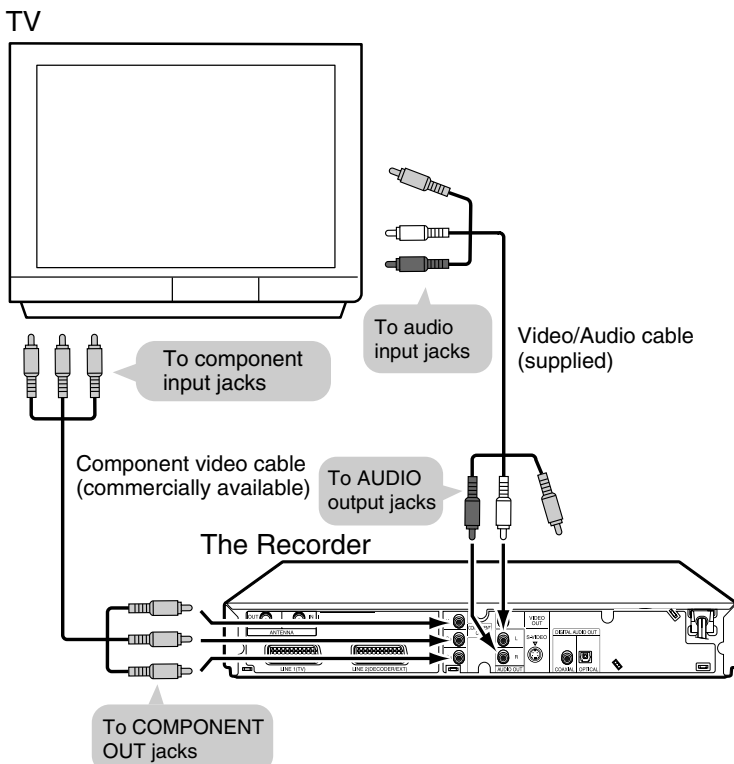
Connecting Using the component Video Cable

Connect the COMPONENT OUT jacks on this Recorder to the component input jacks on your TV using a component video cable (commercially available).

⚠ Important!
• When using this connection:
If the option under "START MENU" - "OTHER SETTINGS 2" - "MODE SETTING" - "L1 OUT" is changed to "RGB", no picture is displayed on the TV. In this case, hold down the **RGB OFF** button on the remote control (under the cover) for more than 2 seconds.

Auto Installation
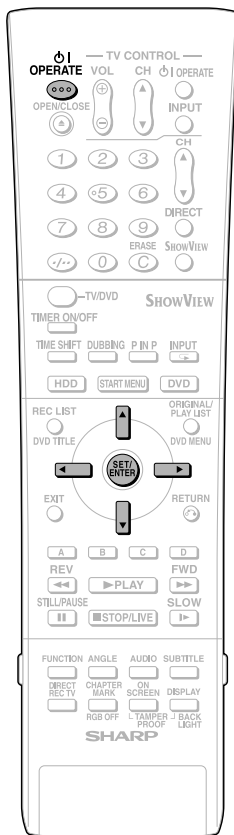
Turning the Power On

Press **OPERATE** on the remote control or Recorder to turn on the power of Recorder.

- When you turn on power, the **HDD** button and **DVD** button on the front of Recorder will blink. If either the **HDD** or **DVD** button is blinking, system processing is in progress, so wait until the button lights up.
- When the Recorder power is turned on for the first time after purchase, the "AUTO INSTALLATION" screen is displayed. Follow the procedure shown on pages **22**, **23**.

To Turn the Power Off

Press **OPERATE** on the remote control or Recorder to turn off power.

- The **HDD** or **DVD** button on the front of Recorder will go out, and the STANDBY indicator will light up.
- If you press **OPERATE** again immediately after turning off, the Recorder may not turn on. If this happens, wait a while and then turn on power again.

About the Power Supply

- Do not unplug the power cord immediately after you plug it into the AC outlet (less than about 15 seconds after plugging in). In very rare cases, this may cause the memory to revert to its initial state, and all timer programmes will be erased. If you pull out the power plug while power is on, it will take a while for the hard disc to get ready when you turn on power the next time. During this time you can only view live broadcasts.
- If you turn on power in a low-tempe rature environment, only live broadcast viewing is possible until the hard disc (HDD) reaches its operating tempera- ture.

Using the AUTO INSTALLATION for initial setting

When the Recorder power is turned on for the first time after purchase, the "AUTO INSTALLATION" screen is displayed. You can use the "AUTO INSTALLATION" function for easy initial settings regarding On-Screen Display language, TV channel, etc. From the second time on, the "AUTO INSTALLATION" screen will not appear.

Preparation

- Turn on the power of TV and switch to the AV input used to connect to the Recorder.

1 Press **OPERATE** for the first time after purchase.

```
    INSTALLATION AUTO
SUIVEZ  LES  INSTRUCTIONS
APPUYEZ  TOUCHE  ENTER
POUR  DEPART.



ENTER  : ENTER       : RETURN
```

- The "INSTALLATION AUTO (AUTO INSTALLATION)" screen is displayed.

2 Press **SET/ENTER** to continue with the installation.

```
              LANGUE
ENGLISH          ESPAÑOL
DEUTSCH          SVENSKA
FRANÇAIS         NEDERLANDS
ITALIANO


▲ ▼ ◀ ▶:SÉLECT.
ENTER  : ENTRÉE       : RETOUR
```

- The "LANGUE (LANGUAGE)" screen is displayed.

3 Select the On-Screen Display language you want to display on the screen using ▲ / ▼ / ◀/ ▶, then press **SET/ENTER**.

◻ NOTE

- If changing the On-Screen Display language, use AUTO INSTALLATION again. See the information under "Important" on page **23** for details on the AUTO INSTALLATION procedure.

```
           COUNTRY
       A              I
       B              N
       DK             P
       FIN            E
       D              S
       NL             CH
       F              OTHERS
▲ ▼ ◀ ▶:SELECT
ENTER  : ENTER       : RETURN
```

- The "COUNTRY" screen is displayed.
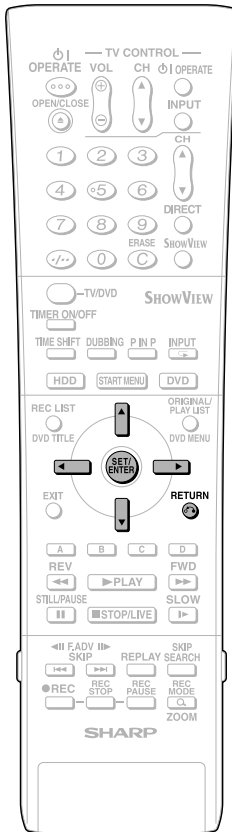
4 **Select the country where you live using ▲ / ▼ / ◀ / ▶ , then press SET/ENTER.**

```
PLEASE BE SURE THE
AERIAL/SCART CABLE IS
CONNECTED.
PRESS ENTER TO CONTINUE.




ENTER : ENTER      ↩ : RETURN
```

5 **Ensure your Aerial cable or SCART cable is connected to the Recorder, then press SET/ENTER to confirm.**

6 **All available terrestrial channels will be automatically installed.**

■ **When connecting with Aerial cable**

```
                        1 CH02

AUTOMATIC TUNING.
PLEASE WAIT.


██████████ –––––––––––––––



                  ↩ : NEXT
```

■ **When connecting with SCART cable**

```



PLEASE WAIT.
        PR 25

```

📄 **NOTE**
• A maximum of 84 channels can be set.

7 **Once Automatic Tuning is complete, the MOVE menu screen will appear showing all the channels the Recorder was able to tune in.**

8 **If you want to move any channels, press ▲ / ▼ / ◀ / ▶ to highlight the channel to be moved. Then press SET/ENTER to confirm.**

```
             MOVE        1 / 5
1 ARD    7WDR3   13SAT3
2ZDF     8BR–3   14S1
3RTL1    9NDR3   15S2
4RTL2   10KAB    16S3
5SAT1   11CH02   17S4
6PRC7   12E3     18ST099
SELECTED : ARD
▲ ▼ ◀ ▶: SELECT
ENTER : ENTER      ↩ : RETURN
```

9 **Press ▲ / ▼ / ◀ / ▶ to highlight the new position for the channel. Then press SET/ENTER to confirm.**

```
             MOVE        1 / 5
1ZDF     7WDR3   13SAT3
2RTL1    8BR–3   14S1
3RTL2    9NDR3   15S2
4SAT1   10KAB    16S3
5 ARD   11CH02   17S4
6PR07   12E3     18ST099

▲ ▼ ◀ ▶: SELECT
ENTER : ENTER      ↩ : NEXT
```

10 **If any more channels are to be moved, repeat step 8 to 9.**

11 **Press RETURN (NEXT) to display the "CLOCK" setting screen.**
• The "CLOCK" screen will appear. Refer to "Clock Setting" on page **25**.

```
         CLOCK

TIME    DATE   YEAR
 0:00   1/01   04 ∗




◀ ▶ : SELECT   ▲ ▼ : CHANGE
ENTER : ENTER      ↩ : RETURN
```

12 **After setting the clock, press SET/ENTER to end the AUTO INSTALLATION procedure.**

⚠ **Important!**
• You can perform the AUTO INSTALLATION function afterward by holding down **CHANNEL ▲** and **DVD** on the front of the Recorder for more than 2 seconds.

About START MENU
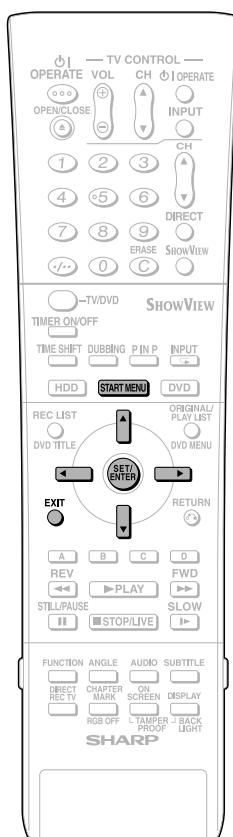
About START MENU

With this Recorder, you can call up functions like Playback, Edit and Other Settings from the "START MENU".
For details on operation procedures, see the page explaining each option.
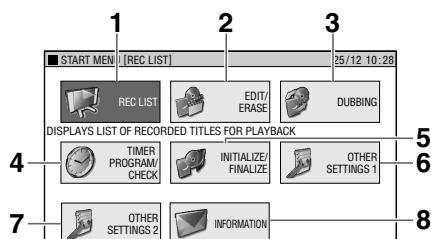
1 REC LIST
Playing back with REC LIST… page **51**
Calling up various functions… page **51**
2 EDIT/ERASE
Editing with the Original Title List/
 Play List… page **67**
Erasing all recorded titles… page **73**
Erasing selected titles… page **73**
Protecting titles from erasure… page **72**
3 DUBBING
High speed dubbing… page **46**
Rate conversion dubbing… page **46**
4 TIMER PROGRAM/CHECK
Timer recording with SHOWVIEW®… page **39**
Timer recording by designating date and
 time… page **41**
Checking/Changing timer settings… page **43**
5 INITIALIZE/FINALIZE
DVD/HDD initialization… page **95**
DVD finalization… page **95**
6 OTHER SETTINGS 1
Recording function setting… page **84**
Viewing/Play setting… page **86**
Adjustment… page **88**
7 OTHER SETTINGS 2
Mode setting… page **92**
Manual tuning… page **94**
Channel sort… page **94**
Clock setting… page **94**
8 INFORMATION… page **33**

Basic START MENU Operation

1 Press START MENU to display the "START MENU" screen.
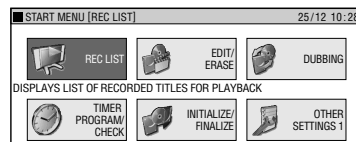
2 Press ▲/▼/◀/▶ to select an option.
Example: When "OTHER SETTINGS 1" is selected
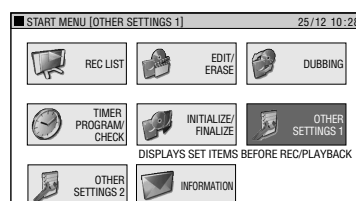
3 Press SET/ENTER to enter the selected option.
• The screen for the selected option will appear.
• Operate using ▲/▼/◀/▶ and SET/ENTER.
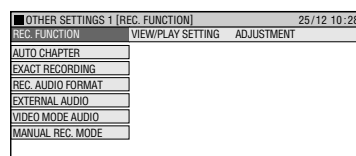
4 Press START MENU or EXIT to quit the START MENU.
• The "START MENU" screen will close, and the screen will return to normal.

NOTE
• If you perform no operation, the "START MENU" screen will disappear after about 1 minute.
• **This operation will not work at the following times:**
 During playback, during Time Shift Viewing, during display of the REC LIST, and at the erase screen.
• If you make a mistake in operation and want to start over, press **RETURN** to go back to the preceding screen.

Clock Setting
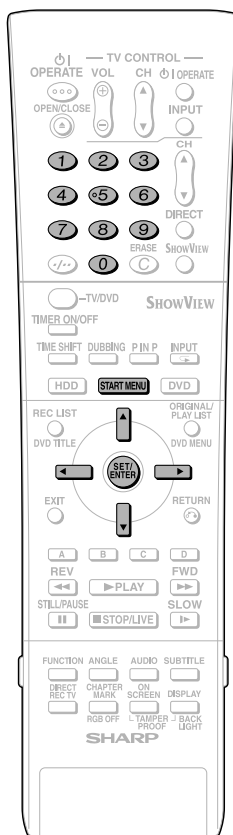
Clock Setting

The clock will normally be set using the VPS/PDC information when your Recorder automatically tunes in the broadcast channels. If for any reason the VPS/PDC signals are not present, your Recorder will not be able to set the clock. This procedure will allow you to set the clock.

1 Press **START MENU** to display the "START MENU" screen.
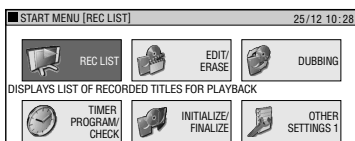
```
■ START MENU [REC LIST]                    25/12 10:28

        REC LIST        EDIT/          DUBBING
                        ERASE
─────────────────────────────────────────────
DISPLAYS LIST OF RECORDED TITLES FOR PLAYBACK
        TIMER          INITIALIZE/       OTHER
        PROGRAM/       FINALIZE       SETTINGS 1
        CHECK
```

2 Press ▲/▼/◀/▶ to select "OTHER SETTINGS 2", then press **SET/ENTER**.

```
MODE SETTING
MANUAL TUNING
CHANNEL SORT
CLOCK SETTING



▲ ▼ : SELECT
ENTER : ENTER      📞  : RETURN
```

3 Press ▲/▼ to select "CLOCK SETTING", then press **SET/ENTER**.

4 Enter the time using the **Number** buttons or ▲/▼.
• If the minutes or hours are less than 10, enter leading 0.

```
              CLOCK

     TIME      DATE   YEAR
     15:06     1/01   04  ∗



     ◀ ▶ : SELECT  ▲ ▼ : CHANGE
ENTER : ENTER    📞   : RETURN
```

5 Press ◀/▶ to select "DATE", then enter the date using the **Number** buttons or ▲/▼.
• For example, for 1st April press **0 1 0 4**.

```
              CLOCK

     TIME      DATE   YEAR
     20:30     1/04   04  ∗


DATE  : DAY/MONTH
◀ ▶ : SELECT   ▲ ▼ : CHANGE
ENTER : ENTER       📞  : RETURN
```

6 Press ◀/▶ to select "YEAR". Enter the last two digits of the year using the **Number** buttons or ▲/▼.
• For example, for 2005 press **0 5**.

7 **Auto Clock Setting**
Press ◀/▶ to select "∗". Press ▲/▼ to change between auto clock on/off ("∗" is "ON", "−" is "OFF").

```
              CLOCK

     TIME      DATE   YEAR
     20:30     1/04   05  ∗


ADJUST  ∗:AUTO  −:OFF
◀ ▶ : SELECT   ▲ ▼ : CHANGE
ENTER : ENTER       📞  : RETURN
```

8 Press **SET/ENTER** to confirm.

Channel Setting
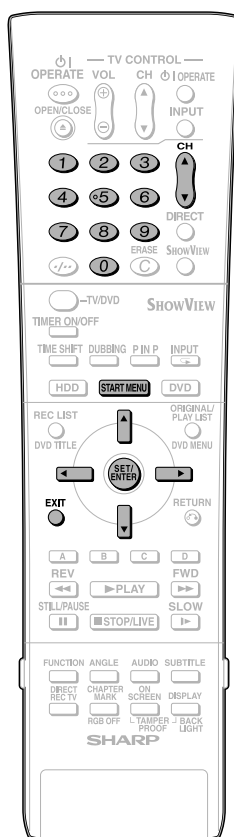
Channel Setting

This Recorder can receive a maximum of 84 channels by presetting the channels into memory.

1 Press **START MENU** to display the "START MENU" screen.

2 Press ▲/▼/◀/▶ to select "OTHER SETTINGS 2", then press **SET/ENTER**.

```
MODE SETTING
MANUAL TUNING
CHANNEL SORT
CLOCK SETTING


▲ ▼ : SELECT
ENTER : ENTER      : RETURN
```
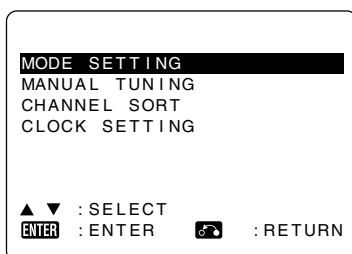
3 Press ▲/▼ to select "MANUAL TUNING", then press **SET/ENTER**.

4 Press ▲/▼ to select "PRESET", then press ◀/▶ to choose the required preset channel.

```
 PRESET        AAA    84
 SYSTEM          L   B/G
 CHANNEL           CH25
 FINE TUNING     ◀  ▶
 DECODER       ON   OFF
 SKIP          ON   OFF


▲ ▼ : SELECT  ◀ ▶ : CHANGE
ENTER : ENTER       : RETURN
```
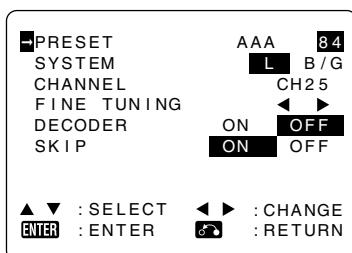
5 Press ▲/▼ to select "SYSTEM", then press ◀/▶ to select "L" or "B/G".

6 Press ▲/▼ to select "CHANNEL", then press ◀/▶ to start tuning in either direction.
   • If it is not the desired channel, press ◀/▶ to continue tuning.

7 Press ▲/▼ to select "FINE TUNING". Then press and hold ◀/▶ until the sharpest colour picture is obtained.

8 Press ▲/▼ to select "DE-CODER". This is preset to "OFF". If you connect a decoder, you must use ◀/▶ to turn the decoder function "ON".

9 Press ▲/▼ to select "SKIP", then press ◀/▶ to select "ON" or "OFF".
   • The SKIP function determines whether the channel can be selected when using the **CH** ▲/▼ instead of the **Number buttons**.

10 Press **SET/ENTER** to store this channel. The Recorder will increment to the next channel up.
   • If any more channels are to be tuned in, repeat this procedure.
   • Once all the channels have been tuned in. Press **START MENU** or **EXIT** to return to the normal screen.

Channel Sort

When your Recorder tunes in broadcast channels automatically, it sorts them into a standard order using internal information. You can change the order of the channel with the following procedure.

1 Press **START MENU** to display the "START MENU" screen.

2 Press ▲/▼/◀/▶ to select "OTHER SETTINGS 2", then press **SET/ENTER**.

3 Press ▲/▼ to select "CHANNEL SORT", then press **SET/ENTER**.

```
        CHANNEL  SORT
MOVE
CANCEL
NAME
```
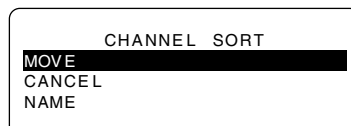
4 Press ▲/▼ to select "MOVE", then press **SET/ENTER**.

```
        MOVE          1/5
1 ARD    7WDR3   13SAT3
2 ZDF    8BR-3   14S1
3 RTL1   9NDR3   15S2
4 RTL2   10KAB   16S3
```
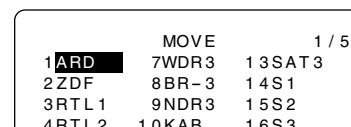
5 Press ▲/▼/◀/▶ to highlight the channel to be moved. Then press **SET/ENTER**.

6 Press ▲/▼/◀/▶ to highlight the new position for the channel. Then press **SET/ENTER**.

```
        MOVE          1/5
1 ZDF    7WDR3   13SAT3
2 RTL1   8BR-3   14S1
3 RTL2   9NDR3   15S2
4 SAT1   10KAB   16S3
5 ARD    11CH02  17S4
6 PR07   12E3    18ST099

▲ ▼ ◀ ▶ : SELECT
ENTER : ENTER      : RETURN
```
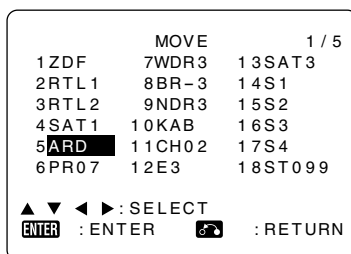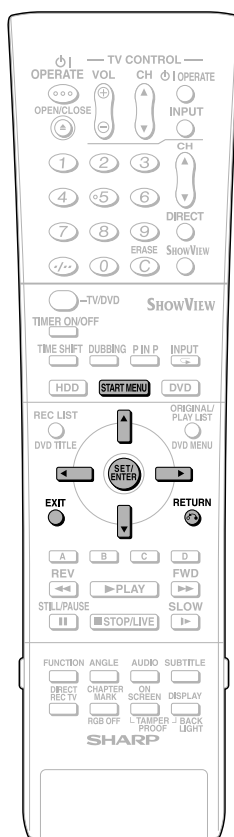
7 **If any more channels are to be moved, repeat the procedure from step 5 to 6.**

8 **When all the channels are in your preferred order, either press RETURN to return to the "CHANNEL SORT" screen or press START MENU or EXIT to return to the normal screen.**

Deleting Channels

If there is a channel you want to delete from the Recorder memory, follow the procedure below.

1 **Press START MENU to display the "START MENU" screen.**

2 **Press ▲/▼/◀/▶ to select "OTHER SETTINGS 2", then press SET/ENTER.**

3 **Press ▲/▼ to select "CHANNEL SORT", then press SET/ENTER.**

4 **Press ▲/▼ to select "CANCEL", then press SET/ENTER.**

5 **Press ▲/▼/◀/▶ to highlight the channel to be cancelled.**

```
              CANCEL         1 / 5
 1 ARD      7WDR3    13SAT3
 2 ZDF      8BR–3    14S1
 3 RTL1     9NDR3    15S2
 4 RTL2    10KAB     16S3
 5 SAT1    11CH02    17S4
 6 PR07    12E3      18ST099

 ▲ ▼ ◀ ▶ : SELECT
 ENTER : ENTER      RETURN : RETURN
```

6 **Press SET/ENTER twice to cancel the channel.**

```
              CANCEL         1 / 5
 1 ZDF      7BR–3    13S1
 2 RTL1     8NDR3    14S2
 3 RTL2     9KAB     15S3
 4 SAT1    10CH02    16S4
 5 PR07    11E3      17ST099
 6 WDR3    12SAT3    18

 ▲ ▼ ◀ ▶ : SELECT
 ENTER : ENTER      RETURN : RETURN
```

7 **When all the channels you wish have been cancelled, either press RETURN to return to the "CHANNEL SORT" screen or press START MENU or EXIT to return to the normal screen.**

Re-naming Channels

When your Recorder tunes in broadcast channels automatically, it names them using the VPS/PDC information. You can change the name of the channel with the following procedure.

1 **Press START MENU to display the "START MENU" screen.**

2 **Press ▲/▼/◀/▶ to select "OTHER SETTINGS 2", then press SET/ENTER.**

3 **Press ▲/▼ to select "CHANNEL SORT", then press SET/ENTER.**

4 **Press ▲/▼ to select "NAME", then press SET/ENTER.**

5 **Press ▲/▼/◀/▶ to highlight the channel to be re-named. Then press SET/ENTER.**

```
              NAME          1 / 5
 1 ARD      7WDR3    13SAT3
 2 ZDF      8BR–3    14S1
 3 RTL1     9NDR3    15S2
 4 RTL2    10KAB     16S3
 5 SAT1    11CH02    17S4
 6 PR07    12E3      18ST099
 SELECTED : ARD
 ◀ ▶ : SELECT   ▲ ▼ : CHANGE
 ENTER : ENTER      : RETURN
```

6 **To enter a new channel name use ▲/▼ to scroll through the characters and ◀/▶ to move to the next position. Then press SET/ENTER.**

7 **If any more channels are to be re-named, repeat the procedure from step 5 to 6.**

8 **When all the channels are named correctly, either press RETURN to return to the "CHANNEL SORT" screen or press START MENU or EXIT to return to the normal screen.**

Display Information
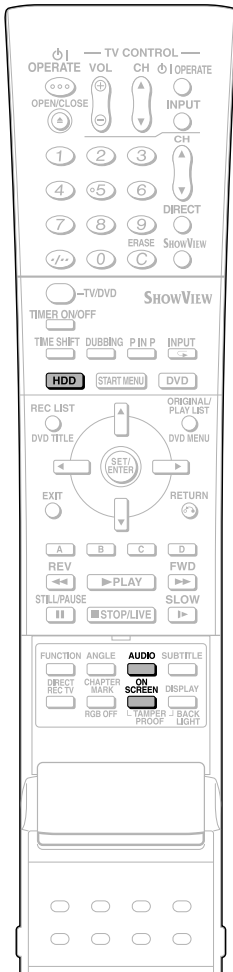
Content of TV Screen Display

When the power is turned on or the channel is switched.

```
PR 2 ARD NICAM STEREO   L R
  ①② ③ ④ ⑤
```

Display automatically
disappears in 3 seconds.
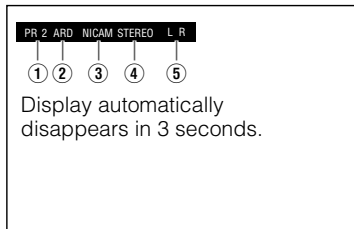
① Preset channel
② Channel name
③ NICAM signal reception
④ Stereo/Bilingual (I/II) signal reception
⑤ Audio output mode display

Monitor Output when Receiving a Stereo or Bilingual Broadcast

When receiving a stereo or bilingual broadcast, press **AUDIO** to change the audio output mode to select Monitor Output. See the table on page **93** for details.

📄 **NOTE**
• When the signal is weak (hard to hear) in a stereo broadcast, press **AUDIO** to turn off "L R" display on the TV screen and change the audio output mode to MONO.

Checking the Channel, Remaining Time of HDD and Number of Titles

When HDD button on the front of the Recorder is lit (HDD mode)

1 Press **ON SCREEN** (under the cover) or **HDD**.
• Channel information is displayed.

```
PR 2 ARD NICAM STEREO   L R
```

• The channel information display will automatically turn off in 5 seconds.

📄 **NOTE**
• The channel information cannot be viewed during playback, Time Shift Viewing, Chasing Playback, or Simultaneous Recording.

2 Press **ON SCREEN** (under the cover) or **HDD** again.
• The HDD information screen is displayed.

```
②    ▶  HDD
③       ORIGINAL ────────── ①
   FINE REMAIN 19h10m
④   T   1 ／ 3 3
⑤   C   4 ／ 6
    ⏱▶ 0 0 : 0 0 : 2 8
⑥   ↻   TITLE REPEAT
⑦
```
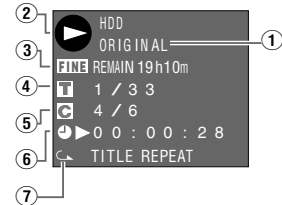
① Original title playback/Play List playback indicator
② Mode display
   • Playback: ▶
   • Recording: ●REC
   • Stop: ■
③ Recording mode and remaining (recordable) time
④ Current title number/Total number of titles
⑤ Current chapter number/Total number of chapters
⑥ Counter
⑦ Repeat Playback indicator

3 Press **ON SCREEN** (under the cover) or **HDD** again.
• The screen changes to the counter display.

```
▶  HDD
   ORIGINAL
⏱▶ 0 0 : 0 0 : 5 1
```

4 Press **ON SCREEN** (under the cover) or **HDD** again.
• Display is turned off.

📄 **NOTE**
• The HDD information screen (step *2*) will automatically disappear in 1 minute.
• The counter display (step *3*) will not disappear automatically. Press **ON SCREEN** (under the cover) or **HDD** to turn it off.
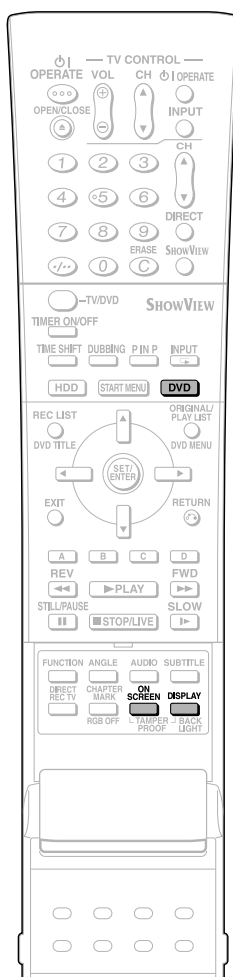
Checking the Channel, Remaining Time of DVD and Number of Titles

When DVD button on the front of the Recorder is lit (DVD mode)

1 Press ON SCREEN (under the cover) or DVD.
- Channel information is displayed.
- The channel information display will automatically turn off in 5 seconds.

2 Press ON SCREEN (under the cover) or DVD again.
- The DVD information screen is displayed.

```
① DVD-RW
   VR ORIGINAL
   FINE REMAIN 0h49m
   🔲  1 / 7
   🔲  1 / 1
   ⏱▶ 0 0 : 0 0 : 1 2
   ↻  TITLE REPEAT
```
② ③ ④ ⑤ ⑥ ⑦

① Disc type, recording format, original title playback/Play List playback indicators
② Mode display
- Playback: ⬤
- Recording: ⬤
- Stop: ⬤
③ Recording mode and remaining (recordable) time
- "FINALIZED" indicator when a finalized disc is played back.
④ Current title number/Total number of titles
- Total number of titles (Stop mode)
- Title number currently played back (Playback mode)
- Title number currently recorded (Recording mode)
⑤ Current chapter number/Total number of chapters
- Total number of chapters (Stop mode)
- Chapter number currently played back (Playback mode)
- Chapter number currently recorded (Recording mode)
⑥ Counter
⑦ Repeat Playback indicator

3 Press ON SCREEN (under the cover) or DVD again.
- The screen changes to the counter display.

```
DVD-RW
VR ORIGINAL
⏱▶ 0 0 : 0 0 : 2 6
```
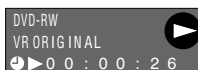
4 Press ON SCREEN (under the cover) or DVD again.
- Display is turned off.

📄 NOTE
- The DVD information screen (step *2*) will automatically disappear in 1 minute.
- The counter display (step *3*) will not disappear automatically. Press ON SCREEN (under the cover) or DVD to turn it off.

Switching Front Panel Display
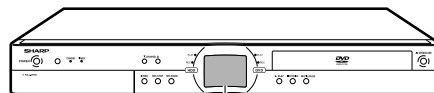
Front panel display

1 Turn the power on.
- Channel display (when watching TV)
- Counter display (during playback/recording)

```
PR     1
```
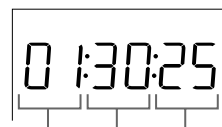
```
01:30:25
```
Hour Minute Second

2 Press DISPLAY (under the cover).
- Remaining time display (when watching TV)
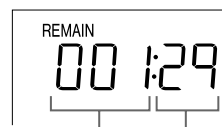
```
REMAIN
001:29
```
Hour   Minute

- Current title number and chapter number (during playback)

```
🔲      🔲
003:001
```
Current title   Current chapter

- Channel currently recorded (during recording)

```
PR     1
```
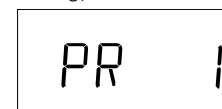
3 Press DISPLAY (under the cover) again.
- The screen returns to the display in step *1*.

📄 NOTE
- Because of technical reasons the time counter is rounding up or down during the time counting process. Therefore small deviations of the time display are normal.

Preparation to Operate This Recorder

HDD	DVD-RW	DVD-RW	DVD-R	DVD VIDEO	VIDEO CD	AUDIO CD	CD-R	CD-RW
	VR MODE	VIDEO MODE					MP3	MP3
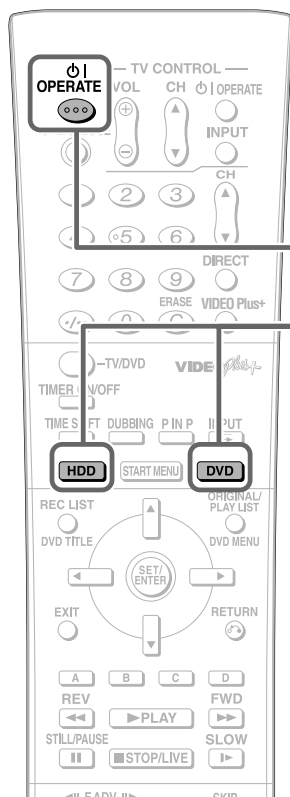
Buttons used for this operation.
Buttons with the same name on the Recorder and remote control will perform the same operation.

Buttons on Remote Control

OPERATE   HDD   DVD

Buttons on Recorder

OPERATE   HDD   DVD
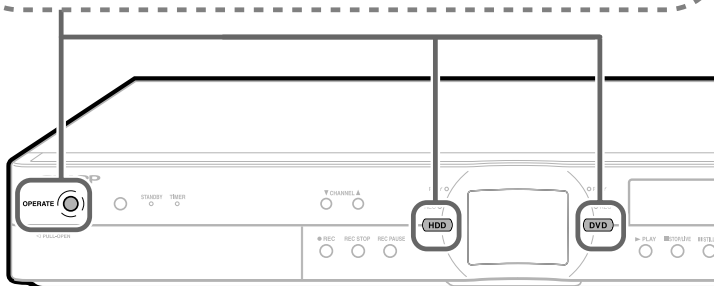
1 Turn on the power of TV.

2 Switch TV input to the AV input used to connect to the Recorder.

3 Press OPERATE to turn the Recorder on.
• TV broadcast will be displayed.

4 Operating HDD
Press HDD.
• The **HDD** button on the front of the Recorder lights up, and HDD operation is enabled.

Operating DVD
Press DVD.
• The **DVD** button on the front of the Recorder lights up, and DVD operation is enabled.

Recording and Playback
• Refer to pages **33** to **63** for details about recording and playback.

📄 **NOTE**
• After turning on power, both the **HDD** and **DVD** buttons on the front of the Recorder will blink for a moment while the Recorder is getting ready. Perform this operation after the HDD button lights up.

Time Shift Viewing/Chasing Playback

With this Recorder, you can enjoy Time Shift Viewing and Chasing Playback—distinctive features of a HDD.

① **Time Shift Viewing**

While you are watching a programme, the phone rings.... At times like this, you can pause the programme at the press of a button and watch the rest later.

📄 NOTE
• Some programmes may not allow you to time shift view due to copyright of the programmes.
• Programmes recorded for Time Shift Viewing will be erased automatically if Time Shift Viewing is cancelled.

Time Shift Viewing (Pause)

You can pause during sudden phone call or when you want to take a note. In such cases press **TIME SHIFT** to pause. Press ▶ **PLAY** to watch the rest of the programme.
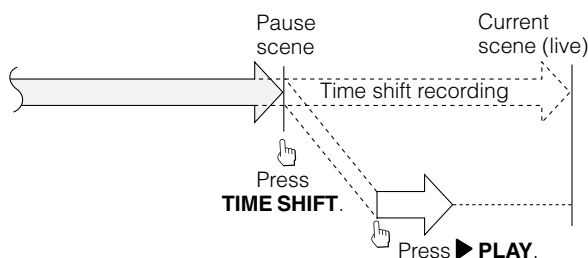
Press ■ **STOP/LIVE** to return to the current (live) broadcast. (Time shift recording stops at this point. Recorded programmes will be erased automatically.)

📄 NOTE
• When remaining capacity of HDD during Time Shift Viewing is gone, Time Shift Viewing will be cancelled. The current (live) broadcast will be displayed and the programmes recorded for Time Shift Viewing will be erased. You cannot view the recorded part of the programme.
• A message will be displayed 5 minutes before timer recording starts. If you are time shift viewing, it will stop 3 minutes later.

② **Chasing Playback**

You return home earlier than expected while timer recording is in progress.... At times like this, you can watch the programme from the beginning without having to wait for the recording to finish.

Chasing Playback (Pause→Play)

Press ▶ **PLAY** during recording or timer recording to watch the recorded programme from the beginning.

Press ▶ **PLAY**.

Playback starts from the beginning of the programme. (Recording continues)
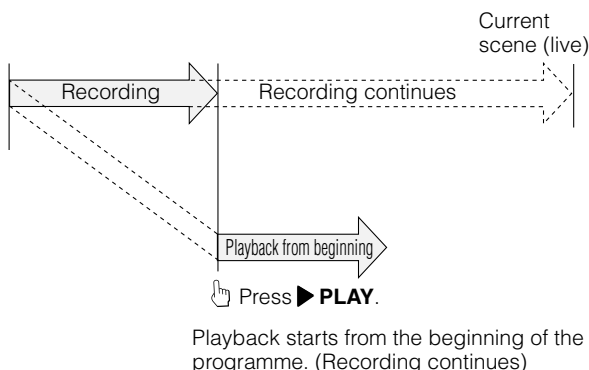
Fast Reverse/Forward Playback

If you press ◀◀ **REV** or ▶▶ **FWD** during Time Shift Viewing or Chasing Playback, Fast Reverse/Forward Playback starts.
If you press ◀◀ **REV** (or ▶▶ **FWD**) again, the speed of Fast Reverse/Forward Playback changes as shown below. (You cannot listen to audio during Fast Reverse/Forward Playback.)

(Approx. 2×) (Approx. 8×) (Approx. 32×)
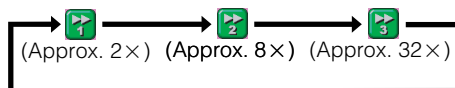
📄 NOTE
• If you perform Fast Forward Playback during Time Shift Viewing or Chasing Playback, the Recorder will automatically switch to the playback screen when Fast Forward Playback reaches about 30 seconds before the live broadcast. The timing that goes automatically back to playback mode will slightly differ depending on the speed of Fast Forward and Recording Mode.
• When the unit automatically goes back to normal Playback during 🔹, you can still view the programme in Fast Forward Playback up to the point of the live broadcast by performing 🔹 or 🔹.

Time Shift Viewing/Chasing Playback
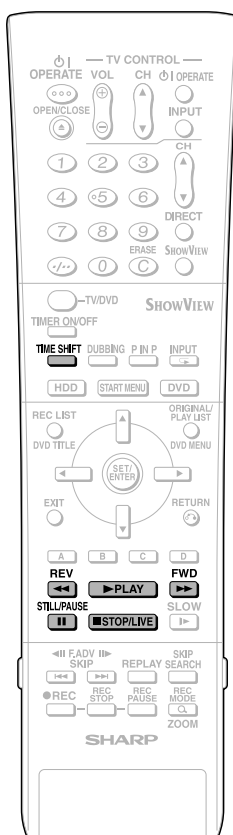
Time Shift Viewing

HDD

1 Press **TIME SHIFT** while viewing a programme.
- Pause screen will be displayed in a few seconds.

  ┌ Pause icon
  (This will become a square icon during Time Shift Viewing.)

  ⏸

- Press ■ **STOP/LIVE** to return to current (live) broadcast.

2 Press ▶ **PLAY**.
- Playback starts from the position you paused.

  ┌ Play icon

  ▶

- Press ⏸ **STILL/PAUSE** to pause playback (Still Playback).
  To cancel Still Playback, press ⏸ **STILL/PAUSE** or ▶**PLAY**.

3 Press ◀◀ **REV** or ▶▶ **FWD** during Time Shift Viewing.
- Each time you press the buttons, the Fast Reverse/Forward Playback speed changes as shown below.

  ▶▶1 → ▶▶2 → ▶▶3
  (Approx. 2×) (Approx. 8×) (Approx. 32×)

  Example: When ▶▶ **FWD** is pressed once

  ┌ Fast Forward Playback 2× icon

  ▶▶1
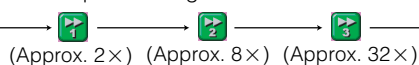
- Press ▶**PLAY** to return to the normal playback speed.

4 Press ■**STOP/LIVE** to return to the current (live) broadcast.
- Time Shift Viewing will be cancelled, and the automatically recorded content will be erased.

📄 NOTE
- Time shift viewing will stop in the following cases.
  - **TIME SHIFT** or ■ **STOP/LIVE** is pressed.
  - HDD remaining capacity is gone.
  - The broadcast whose recording is prohibited is received.

Chasing Playback

HDD

1 Press ▶ **PLAY** during recording.
- Playback starts from the beginning of the programme being recorded. (Chasing Playback)
- Press ⏸ **STILL/PAUSE** to pause playback (Still Playback).
  To cancel Still Playback, press ⏸**STILL/PAUSE** or ▶**PLAY**.

2 Press ◀◀ **REV** or ▶▶ **FWD** during Chasing Playback.
- Each time you press the buttons, the Fast Reverse/Forward Playback speed changes as shown below.

  ▶▶1 → ▶▶2 → ▶▶3
  (Approx. 2×) (Approx. 8×) (Approx. 32×)

  Example: When ▶▶ **FWD** is pressed once

  ┌ Fast Forward Playback 2× icon

  ▶▶1
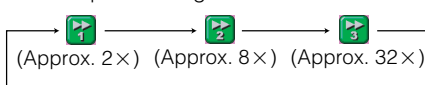
- Press ▶ **PLAY** to return to the normal playback speed.

3 Press ■**STOP/LIVE** to return to the live broadcast which is being recorded.

Recording to HDD
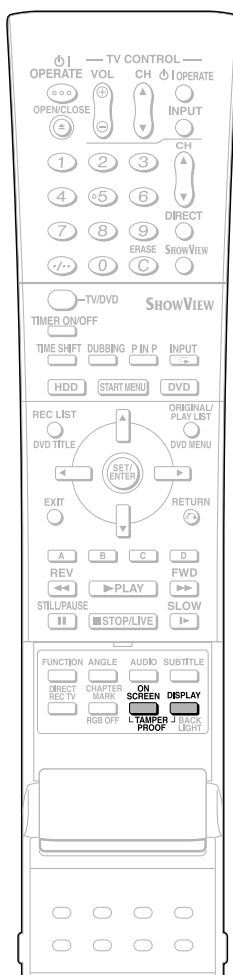
This section explains recording on the hard disc (HDD). (For information on recording to DVD, see page **35**.)

Confirming Remaining Time for Recording

To confirm on TV screen
- Press **ON SCREEN** (under the cover).

To confirm on front display panel
- Press **DISPLAY** (under the cover).

Confirming Remaining Time

This display means that you can record 20 hours more in FINE mode.

```
■   HDD
    ORIGINAL
FINE REMAIN 20h0m
T  1 0
C  1 0
⏻ ■ 0 0 : 0 0 : 0 0
```

- During live programme viewing or HDD playback, remaining time of recording in the selected recording mode will be displayed.
- During HDD recording, remaining time of recording in the currently selected recording mode will be displayed.

Guide to Recordable Length of Time

Recording Mode

Recording mode	FINE	SP	LP	EP
Recording time (DV-HR350F)	30 hr	50 hr	100 hr	150 hr
Recording time (DV-HR300F)	20 hr	33 hr	67 hr	100 hr

- Remaining time for recording differs according to the recording mode.
- Recordable time might be less than above figures depending on the programme to be recorded.
- MN (manual) recording mode setting allows you to select the picture quality from among 32 levels on the "MANUAL REC. MODE" screen (page **37**).

Monitoring a Programme Being Recorded while Playing Back a Disc (page 63)
- **Picture in picture**
  This lets you monitor a programme being recorded, while playing back a disc, using the Simultaneous Recording/Playback function.

Dubbing (page 44)
- Titles recorded on HDD can be saved by dubbing them to DVD-RW/R. (You can also dub from DVD-RW/R to HDD.)
- You can batch dub up to 5 programmes.

Recording Programmes to HDD for High Speed Dubbing from HDD to DVD-RW/R in Video Mode

- **High Speed Dubbing Priority**
  Normally, recording onto HDD is done using own format, but recording can also be done using a format for high speed dubbing onto DVDs formatted in Video mode.
  To perform high speed dubbing onto a DVD in Video mode, set "HI SP DUB PRIORITY" to "YES" and then record. (See page **45**.)

Chasing Playback (page 32)
- This lets you playback and watch a programme from the beginning while it is being recorded on HDD.

Simultaneous Recording/ Playback (page 63)
- This lets you playback and watch a programme recorded on HDD, or a DVD or CD, while recording another programme on HDD.

Cutting out Commercials (pages 67, 78)
- After recording is finished, you can cut out commercials and other unnecessary scenes by calling up the Erase Scene function.
  (Commercials cannot be cut out automatically during recording.)

Tamper Proof
- You can set Tamper Proof to prevent operations by mistake during recording or timer recording.
  ① Press and hold **TAMPER PROOF** (**ON SCREEN** and **DISPLAY** together) for more than 2 seconds.
  ② Each time you perform this operation, the function is activated or deactivated.
- If you try to operate the Recorder while Tamper Proof is set, "🔒" blinks in the front display panel and tells you that Tamper Proof is set.

Information
- When there is a report message (e.g. when a timer recording was not successfully performed), the Recorder displays an on-screen message telling that there is a report message.
  Check the report message by selecting "INFORMATION" on the "START MENU".
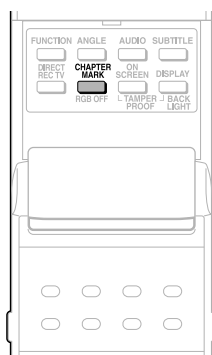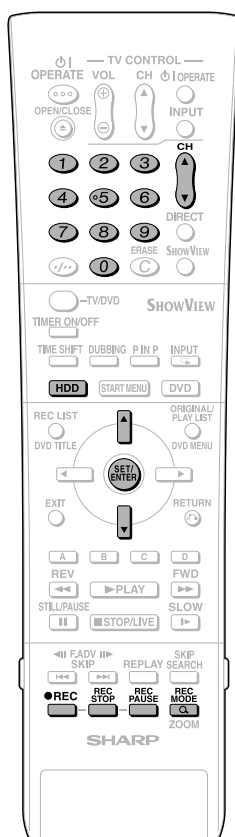
Direct Recording to HDD

HDD

Explained below is the standard procedure for recording the programme being viewed onto HDD.
- A maximum of 12 hours can be recorded onto HDD in one direct recording session.
- A maximum of 199 programmes can be recorded (saved) onto HDD.

NOTE
- The content being recorded will not be recorded if power failure occurs or if power cord is accidentally unplugged.
  * Also direct recording to a DVD-RW/R is possible (page **35**).

Preparation for Direct Recording
- When you record NICAM broadcast, set "NICAM" setting to "AUTO" (see page **92**).
- When recording to the HDD, the recorded data is the same as that recorded to a DVD-RW in VR mode.

1 Press **HDD** to select HDD mode.
- The **HDD** button on the front of the Recorder lights up.
- HDD mode is selected automatically when the power is turned on.

2 Press the **Number** buttons or CH▲/▼ to select the channel to be recorded.

3 Press **REC MODE** to select the recording mode.
- The recording mode changes as shown below each time the button is pressed.

$$\rightarrow FINE \rightarrow SP \rightarrow LP \rightarrow EP \rightarrow MN \times \times \rightarrow$$

- Recording mode set by selecting "MN×✕" is the recording mode set on the "MANUAL REC. MODE" Select screen (page **38**).

4 Press ● **REC** during broadcast viewing.
- Recording begins and REC icon displays in TV screen.
- REC indicator (for HDD) on the front of Recorder is lit red during recording.

REC icon

```
REC   HDD
      ORIGINAL
FINE  REMAIN 19h8m
T     1 / 1
C     1 / 1
⏱●00:19:30
```

5 Press **REC PAUSE** to pause recording.
- Record Pause does not work during Chasing Playback.
- During pause, the REC indicator (for HDD) on the front of the Recorder blinks.

REC PAUSE icon
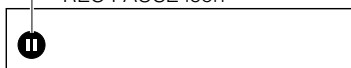
6 Press **REC PAUSE** to resume recording.

7 Press **REC STOP** to stop recording.
- "DATA IS BEING RECORDED TO DISC." displays on TV screen and recording stops.
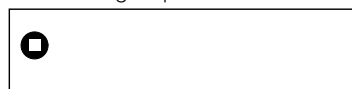
NOTE
- Data is still written to the disc after recording is stopped, and so you may be unable to start the next recording immediately.
- You cannot record programmes whose recording is prohibited.
- Timer recording cannot be performed during direct recording. To perform timer recording, stop direct recording before the preset time for timer recording.

Inserting Chapter Marks Manually during Recording
Press **CHAPTER MARK** (under the cover).
- "RECORDED CHAPTER MARK. " is displayed and chapter mark will be inserted.
- You cannot insert chapter marks during Simultaneous Recording/Playback.

Setting the Record End Time during Direct Recording (Simple Recording Timer)

HDD

1 Press ● **REC** on the remote control during recording.
- The "SET STOP TIME" screen is displayed.

2 Press ▲/▼ to set the end time.
- The end time can be set in units of 15 minutes.
- Total recording time cannot exceed 12 hours so the end time has to be set accordingly.
- Press **EXIT** to stop setting midway through.

```
SET STOP TIME.
STOP TIME 10 : 30
⬍ SELECT   (ENTER) ENTER
```

3 Press **SET/ENTER**.
- The record end time is set, and the Simple Recording Timer indicator (clock mark) lights up on the front display panel.

Recording to DVD
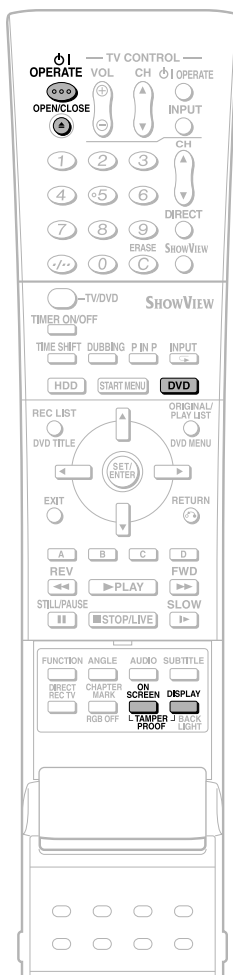
This section explains recording on the DVD (For information on recording to HDD, see page **33**.)

Checking Remaining Time and Other Information

Press **ON SCREEN** (under the cover) during DVD playback or recording.

- Disc capacity and the number of recorded titles, etc. are displayed. It is recommended to confirm before recording.

```
DVD-RW
VR ORIGINAL          ⬛
FINE REMAIN 0h30m ────── Disc capacity
T   2            ────── Number of titles
C   1 0          ────── Number of chapters
⏱⬛ 0 0 : 0 0 : 0 0
```
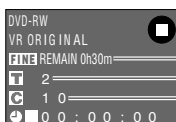
- "REMAIN 0h0m" or nothing will be displayed when an unrecordable disc is set.

📄 **NOTE**

- Disc remaining time display is approximate measure of disc capacity. There may be space left in disc capacity after recording. (Remaining time during recording and after recording might not be the same.)

Simultaneous Recording/ Playback (page **63**)

- HDD playback is possible while recording or timer recording to DVD.

Dubbing (page **44**)

- Dubbing titles recorded on DVD to HDD or titles recorded on HDD to DVD-RW/R are possible.
- **Exact Dubbing:** Automatically selects the appropriate recording mode according to the remaining capacity of DVD when dubbing titles recorded on HDD to DVD.

Not Enough Disc Capacity

- **Exact Recording (page 84)**
  Exact recording functions when the selected recording mode is not appropriate to fit the programme to the disc when you timer record.
- **Alternate Recording (page 89)**
  Alternate recording functions when you forget to load a DVD for timer recording. It automatically timer records the programme to HDD.

Cutting TV Commercials (page **67**)

- You can cut unwanted scenes like TV commercials by using the ERASE SCENE function after the recording. (Cannot cut TV commercials automatically.)
- You cannot cut scenes when you record programmes by Video mode to DVD-RW or DVD-R.

Tamper Proof

- You can set Tamper Proof to prevent operations by mistake during recording or timer recording.
  ① Press and hold **TAMPER PROOF** (**ON SCREEN** and **DISPLAY** together) for more than 2 seconds.
  ② Each time you perform this operation, the function is activated or deactivated.
- If you try to operate the Recorder while Tamper Proof is set, "🔑" blinks in the front display panel and tells you that Tamper Proof is set.

Loading Disc

1 Press **OPERATE** to turn the power on.

2 Press **OPEN/CLOSE** on the Recorder to open the disc tray.
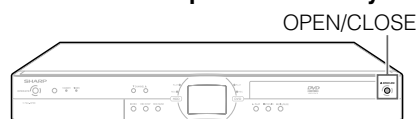
OPEN/CLOSE

3 Load disc on the disc tray.

- Insert the disc with the label face up.
- In case of disc recorded on both sides, face the side you want to record down.

4 Press **OPEN/CLOSE** to close the disc tray.

Direct Recording to DVD

DVD-RW	DVD-RW	DVD-R
VR MODE	VIDEO MODE	

Explained below is the standard procedure for recording the programme being viewed onto DVD.

- You can create a maximum of 99 original titles.
- Record in VR mode when you want to edit later. Edit functions will be limited when you record in Video mode.

Preparation for Direct Recording

- When you record NICAM broadcast, set "NICAM" setting to "AUTO" (see page **92**).

1 Press **DVD** to select DVD mode.

- The **DVD** button on the front of the Recorder lights up.
- When the power is turned on, HDD mode is selected automatically.

Recording to DVD
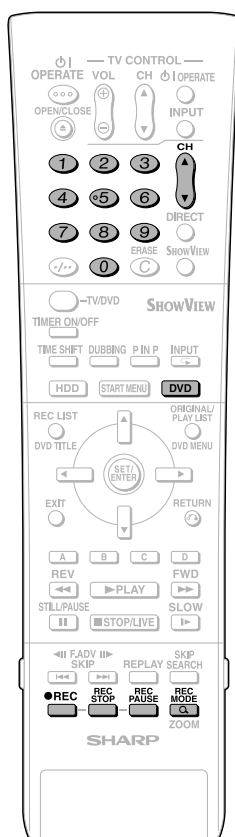
2 Set a DVD-RW or DVD-R disc.

- When a new DVD-RW disc not initialized yet is set, VR mode initializing starts automatically. When initializing is over, you can start recording.
- When you want to re-initialize in Video mode, select "DVD VIDEO MODE INIT." screen (page **95**).
- When you want to initialize in Video mode from the beginning, select "AUTO INITIALIZING" screen (page **95**).

3 Press **Number** buttons or **CH ▲/▼** to select the channel to record.

4 Press **REC MODE** to select the desired recording mode.

- The recording mode changes as shown below each time the button is pressed.

$$\rightarrow FINE \rightarrow SP \rightarrow LP \rightarrow EP \rightarrow MN \times \times \rightarrow$$

- Recording mode set when "MN×✕" is selected is the recording mode set on the "MANUAL REC. MODE" screen (page **38**).

5 Press ● REC.

- Recording begins and REC icon is displayed.
- The REC indicator (for DVD) on the front of the Recorder is lit red during recording.

```
DVD-RW                          REC
VR ORIGINAL
FINE REMAIN 1h0m
T   1 / 1
C   1 / 1
● ● 0 0 : 0 0 : 0 1
```

6 Press **REC PAUSE** to pause recording.

⏸

- Pause will not function during timer recording.
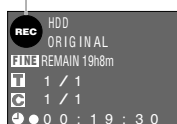- The REC indicator (for DVD) on the front of the Recorder blinks during Recording Pause mode.

7 Press **REC PAUSE** to resume recording.

8 Press **REC STOP** to stop recording.

- "DATA IS BEING RECORDED TO DISC." displays on TV screen and recording stops.

⏹

- Stop recording first when you take out the disc.

🗋 NOTE

- Data is still written to the disc after recording is stopped, and so you may be unable to start the next recording immediately.
- Press **ON SCREEN** (under the cover) to confirm remaining time of DVD or check the counter display during recording.
- You cannot record programmes which prohibit recording.
- Recording either stops or pauses automatically in the following cases.
  —Programme which prohibits recording is on air.
  —Unable to continue recording for some reason.
- Timer recording cannot be performed during direct recording. To perform timer recording, stop direct recording before the preset time for timer recording.

You may not be able to record on disc edited by other recorder.

- If a disc edited by other DVD recorder has more than 999 chapter marks, it cannot be edited (or recorded) with this Recorder.
- If a disc edited by other DVD recorder has added or erased scenes 51 times or more per title or the disc is protected, it cannot be edited (or recorded) with this Recorder.

About Recording to DVD in Video Mode

- In case you are recording to DVD in Video mode and recording stops due to power failure etc., recorded contents a few minutes before the stop may not be recorded.
- For details on limitation during recording in Video mode, see page **45** too.

Inserting Chapter Marks Manually during Recording

Press **CHAPTER MARK** (under the cover).
- "RECORDED CHAPTER MARK." displays and chapter mark is recorded.
- You can only record chapter marks manually when recording to DVD-RW (VR mode).
- You cannot record chapter marks manually when recording to DVD-RW (Video mode) or DVD-R, or during Simultaneous Recording/Playback.

Setting Record End Time during Direct Recording

- You can set record end time during direct recording to DVD. For details see "Setting the Record End Time during Direct Recording (Simple Recording Timer)" on page **34**.

Setting Recording Mode (HDD/DVD)

- HDD recording time is approximate measure. DVD recording time is approximate measure using 4.7GB disc.
- This does not guarantee the length of recording time. Actual recording time may be shorter than that indicated below depending on image quality and other aspects.

HDD Recording Mode and Recording Time

`HDD`

DV-HR350F

	Recording Mode	Recording Time (approx.)
EP	MN1	150 Hr
	MN2	144 Hr
	MN3	137 Hr
	MN4	131 Hr
	MN5	125 Hr
	MN6	119 Hr
	MN7	112 Hr
	MN8	106 Hr
LP	MN9	100 Hr
	MN10	96 Hr
	MN11	92 Hr
	MN12	88 Hr
	MN13	83 Hr
	MN14	79 Hr
	MN15	75 Hr
	MN16	71 Hr
	MN17	67 Hr
	MN18	63 Hr
	MN19	58 Hr
	MN20	54 Hr
SP	MN21	50 Hr
	MN22	48 Hr
	MN23	46 Hr
	MN24	44 Hr
	MN25	42 Hr
	MN26	40 Hr
	MN27	38 Hr
	MN28	35 Hr
	MN29	34 Hr
	MN30	33 Hr
	MN31	32 Hr
FINE	MN32	30 Hr

DV-HR300F

	Recording Mode	Recording Time (approx.)
EP	MN1	100 Hr
	MN2	96 Hr
	MN3	91 Hr
	MN4	87 Hr
	MN5	83 Hr
	MN6	79 Hr
	MN7	75 Hr
	MN8	71 Hr
LP	MN9	67 Hr
	MN10	64 Hr
	MN11	61 Hr
	MN12	58 Hr
	MN13	55 Hr
	MN14	53 Hr
	MN15	50 Hr
	MN16	47 Hr
	MN17	44 Hr
	MN18	42 Hr
	MN19	39 Hr
	MN20	36 Hr
SP	MN21	33 Hr
	MN22	32 Hr
	MN23	30 Hr
	MN24	29 Hr
	MN25	28 Hr
	MN26	26 Hr
	MN27	25 Hr
	MN28	24 Hr
	MN29	23 Hr
	MN30	22 Hr
	MN31	21 Hr
FINE	MN32	20 Hr

DVD-RW/R Recording Mode and Recording Time

`DVD-RW` VR MODE   `DVD-RW` `DVD-R` VIDEO MODE

Recording Mode	Recording Time (approx.)		Recording Mode	Recording Time (approx.)
MN1	360 Min	**EP**	MN1	360 Min
MN2	345 Min		MN2	345 Min
MN3	330 Min		MN3	330 Min
MN4	315 Min		MN4	315 Min
MN5	300 Min		MN5	300 Min
MN6	285 Min		MN6	285 Min
MN7	270 Min		MN7	270 Min
MN8	255 Min		MN8	255 Min
MN9	240 Min	**LP**	MN9	240 Min
MN10	230 Min		MN10	230 Min
MN11	220 Min		MN11	220 Min
MN12	210 Min		MN12	210 Min
MN13	200 Min		MN13	200 Min
MN14	190 Min		MN14	190 Min
MN15	180 Min		MN15	180 Min
MN16	170 Min		MN16	170 Min
MN17	160 Min		MN17	160 Min
MN18	150 Min		MN18	150 Min
MN19	140 Min		MN19	140 Min
MN20	130 Min		MN20	130 Min
MN21	120 Min	**SP**	MN21	120 Min
MN22	110 Min		MN22	110 Min
MN23	105 Min		MN23	105 Min
MN24	100 Min		MN24	100 Min
MN25	95 Min		MN25	95 Min
MN26	90 Min		MN26	90 Min
MN27	85 Min		MN27	85 Min
MN28	80 Min		MN28	80 Min
MN29	75 Min		MN29	75 Min
MN30	70 Min		MN30	70 Min
MN31	65 Min		MN31	65 Min
MN32	60 Min	**FINE**	MN32	60 Min

NOTE

- Higher recording mode means higher picture quality and lower recording mode means longer recording time.
- Picture quality of recorded content changes distinctively if the recording mode changes from the recording modes right below the bold lines in left chart and recording modes right above the bold lines. The positions of the bold lines differ among HDD, DVD-RW (VR Mode) and DVD-RW/R (Video Mode).
- With MN22-32, VBR recording has a large effect, so the actual recording time will be longer.

Setting Recording Mode (HDD/DVD)
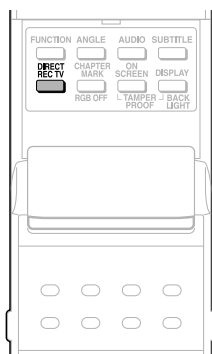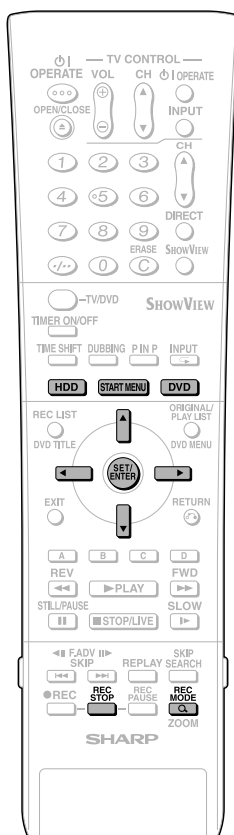
Setting the Manual Recording Mode (MN)

HDD	DVD-RW VR MODE	DVD-RW VIDEO MODE	DVD-R

You can set the manual recording mode which is used when you select "MN XX" with **REC MODE**.

1 Press **START MENU** to display the "START MENU" screen.

2 Press ▲/▼/◀/▶ to select "OTHER SETTINGS 1", then press **SET/ENTER**.

3 Press ◀/▶ to select "REC. FUNCTION".

4 Press ▲/▼ to select "MANUAL REC. MODE", then press **SET/ENTER**.

```
■OTHER SETTINGS 1[REC. FUNCTION ]          25/12 10:28
REC. FUNCTION      VIEW/PLAY SETTING    ADJUSTMENT
AUTO CHAPTER
EXACT RECORDING
REC . AUDIO FORMAT
EXTERNAL AUDIO
VIDEO MODE AUDIO
MANUAL REC. MODE
```

5 Press ◀/▶ to select the desired recording mode, then press **SET/ENTER**.
- Refer to the table on page **37**.

```
■OTHER SETTINGS 1[MANUAL REC. MODE]        25/12 10:28
ABLE TO SELECT 1 OF 32 LEVELS OF PICTURE QUALITY IN
MANUAL REC. MODE WHEN USING RECORDING MODE SWITCH.


EP          LP              SP           FINE
∎∎∎∎∎∎∎∎∎∎∎∎∎∎∎∎∎∎∎∎∎∎∎∎∎∎∎∎∎∎∎∎
```

☐ NOTE
When playing back a DVD-RW/R disc (Video Mode) recorded with the recorder using a DVD player.
- When you playback a disc recorded with the manual mode of the recorder using a DVD player, it may not be able to playback depending on the model (some particular modes cannot be played back).

Direct Recording the TV programme you are watching

HDD	DVD-RW VR MODE	DVD-RW VIDEO MODE	DVD-R

⚠ Important!
- This function is available only when connecting to your TV using SCART cable.

You can record the TV programme you are watching with easy operation.

1 Press **DVD** or **HDD** to select the recording disc.

2 Press **DIRECT REC TV** (under the cover) to start recording.

3 Press **REC STOP** to stop recording.

Timer Recording
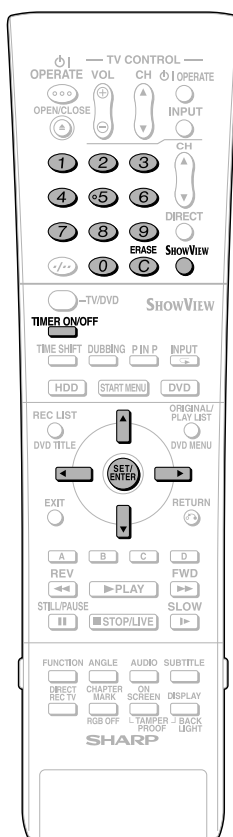
Timer Recording with SHOWVIEW® system

HDD | DVD-RW VR MODE | DVD-RW VIDEO MODE | DVD-R

The operation method is the same for both HDD and DVD.
- The SHOWVIEW® system allows you to programme your Recorder for timer recording simply by inputting the SHOWVIEW number.
- The SHOWVIEW numbers are listed in most newspapers, television guides, and local CATV listings. Simply by inputting this SHOWVIEW number, you can program your Recorder for timer recording, eliminating the need to input programme start time, stop time, channel, date and other information usually necessary for timer recording.
- Up to 16 timer programs can be stored. (This includes Timer Program.)

Preparation to Use SHOWVIEW system
- Check that the clock is displaying the correct time.
- If the TIMER indicator on the front of the Recorder is lit, press **TIMER ON/OFF** to turn off the TIMER indicator and to set the TIMER STANDBY mode to off.

1 Press SHOWVIEW (button) to display the "SHOWVIEW" setting screen.

```
SHOWVIEW  SYSTEM

 SHOWVIEW  NO.

    ONCE      WEEKLY  DAILY

▲ ▼ : SELECT    0~9  : INPUT
ENTER : ENTER    ↩    : RETURN
```
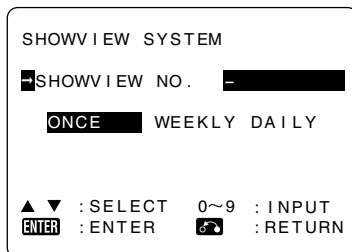
2 Press Number buttons to enter the SHOWVIEW number.
- Press **ERASE** if you make a mistake in the SHOWVIEW number. Each time you press the button, one digit will be erased.

3 Press ▼, then use ◀/▶ to select "ONCE", "WEEKLY" or "DAILY".
- If you want to make additional recordings at the same time each day or week, select "DAILY" or "WEEKLY" as appropriate.

4 Press SET/ENTER to confirm.

```
                          1 / 4
DATE  PR START STOP
25/12W--  12:35 13:05 F*H
--/-- --  -:-- -:-- ---
--/-- --  -:-- -:-- ---
--/-- --  -:-- -:-- ---

PR  : PRESET
◀ ▶ : SELECT    ▲ ▼  : CHANGE
ENTER : ENTER    ↩    : RETURN
```
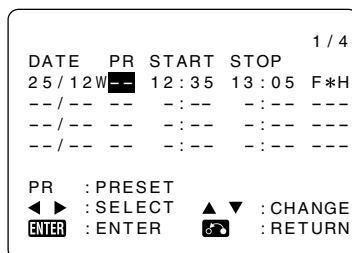
NOTE
- "ERROR" will appear if you have entered a number that is not a correct SHOWVIEW number. If this happens press **ERASE** to delete the numbers as required and enter the correct SHOWVIEW number.
- Check that the menu list agrees with the times shown in the TV listing. If it does not, press **ERASE** to return to the SHOWVIEW system menu, then enter the correct SHOWVIEW number.

The first time that you use the SHOWVIEW system to make a recording on each channel preset, "PR" may be highlighted on the On-Screen Display.

5 Enter the channel button you want to record using ▲/▼ or Number buttons.
- For Example to record a programme on channel 8 press **0 8**.

6 Press ◀/▶ to select "START (time)" / "STOP (time)" then use ▲/▼ or the Number buttons to change the time if necessary.
- When entering less than 10 hours or minutes add a "0" before the number, for example for 12:05 start, press **1 2 0 5**.

7 Press ▶ to select "REC. MODE", then use ◀/▶ to select the recording mode.
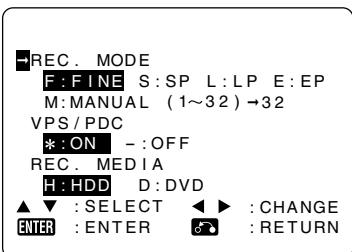
```
 REC.  MODE
  F:FINE  S:SP L:LP E:EP
  M:MANUAL  (1~32) →32
 VPS/PDC
  *:ON   -:OFF
 REC.  MEDIA
  H:HDD  D:DVD
▲ ▼ : SELECT    ◀ ▶  : CHANGE
ENTER : ENTER    ↩    : RETURN
```

When "M:MANUAL (1~32)" is selected:
- Select the recording mode with ◀/▶, then press **SET/ENTER**. (The recording mode can be selected from 32 levels.)

Timer Recording
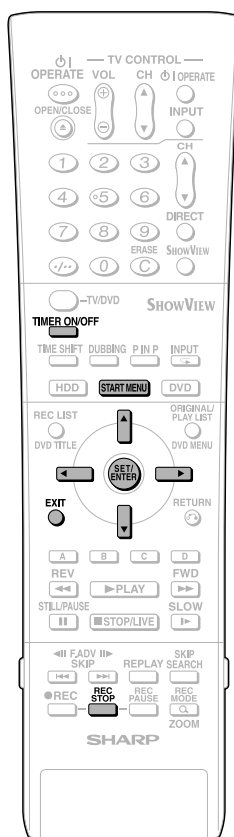
8 Press ▲/▼ to select "VPS/PDC", then use ◄/► to turn the VPS/PDC setting ON("∗")/OFF("-").

9 Press ▲/▼ to select "REC. MEDIA", then use ◄/► to select the recording disc ("H:HDD" or "D:DVD").

10 Press **SET/ENTER** to confirm.

```
                                    1 / 4
DATE  PR START STOP
25/12W 8 12:05 13:05  S∗D
--/-- -- -:--   -:-- ---
--/-- -- -:--   -:-- ---
--/-- -- -:--   -:-- ---


◄ ►  :SELECT    ▲ ▼  :CHANGE
ENTER :ENTER         :RETURN
```

11 Press **SET/ENTER**.

```
SHOWVIEW SYSTEM

SHOWVIEW NO.   -

    ONCE    WEEKLY DAILY



▲ ▼ :SELECT   0~9 :INPUT
ENTER :ENTER       :RETURN
```

- The SHOWVIEW screen is displayed. If you want to enter further SHOWVIEW system recordings repeat this procedure.

12 When you have completed entering the timer settings, press **START MENU** or **EXIT** to exit from the "SHOWVIEW" screen.

13 (When you select "D:DVD" in step **9**, ensure the recordable DVD-RW/R is inserted into the Recorder) Press **TIMER ON/OFF** to place the Recorder in TIMER STANDBY mode.
- The TIMER indicator on the front of the Recorder lights up.
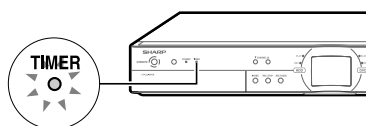
- The channel cannot be changed during TIMER STANDBY mode. To change the channel, set TIMER STANDBY to off.

- You can also access the SHOWVIEW system menu by performing the following procedure:
  ① Press **START MENU**.
  ② Press ▲/▼/◄/► to select "TIMER PROGRAM/CHECK", then press **SET/ENTER**.
  ③ Press ▲/▼ to select "SHOWVIEW", then press **SET/ENTER**.
  ④ Continue from step **1** of this procedure.
  ⑤ Press **START MENU** or **EXIT** to exit from timer recording.
- VPS/PDC is a signal broadcast by some TV stations which adjusts the start and stop time of your Recorder recording. This ensures that if there is a change in broadcast time for your programme the Recorder will still record the whole programme.
  It is essential that the start time as it appears in the TV listing is used to programme the Recorder, as this information is used to identify the VPS/PDC signal corresponding to your programme.
- Even if recording by timer programming is completed, since the Recorder is VPS/PDC system compatible, the power may remain on internally (blue background output, LCD backlight off), but it will be turned off around 4 AM the next day or three hours after recording is complete.
- Data is still written to the disc after first timer recording is stopped, the first part of the next programme may not be recorded.
- During recording, press **REC STOP** to cancel the recording. If there are further recordings to be made, the Recorder will not return to TIMER STANDBY mode.
- When you set a DVD as recording media, timer recording will not start during disc playback. If "ALTERNATE RECORDING" is set to "YES", the programme will be timer recorded to HDD.
- Timer recording will not start during dubbing.
- Manual recording and editing cannot be performed during timer standby.

Convenient Functions When Recording to DVD
Exact Recording (page 84)
- If you set EXACT RECORDING to "YES", the Recorder will automatically adjust the recording mode of timer recording so the recorded programs will fit on one disc.
Alternate Recording (page 89)
- You can record timer programs to HDD automatically when Exact Recording cannot fit the programmes on one disc.
- Alternate Recording will also function when you forgot to insert the disc for recording.

To check, change or cancel timer settings
- See page **43**.

To stop recording while timer recording is in progress
- If you press **REC STOP**, "TIMER RECORDING IS IN PROGRESS, IF YOU PRESS THE REC. STOP BUTTON ONCE MORE, TIMER RECORDING CANCELS AND RECORDING STOPS." will appear on the screen. Even that message goes out of the screen, pressing **REC STOP** one more time will stop the recording.
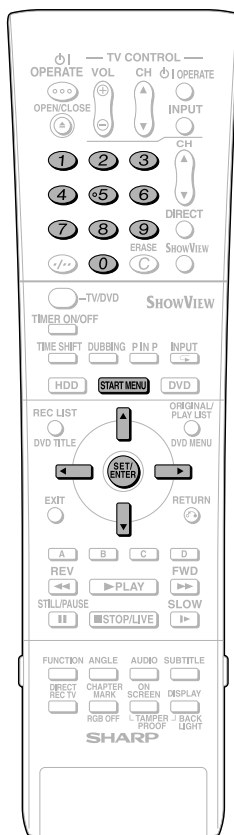
Timer Recording by Specifying Date, Time and Channel

HDD	DVD-RW	DVD-RW	DVD-R
	VR MODE	VIDEO MODE	

The operation method is the same for both HDD and DVD.
- You can timer record up to 16 programmes scheduled within a year, including SHOWVIEW system.
- You can consecutively record up to 12 hours to HDD.

Preparation for Timer Recording
- Check that the clock is displaying the correct time.
- If the TIMER indicator on the front of the Recorder is lit, press **TIMER ON/OFF** to turn off the TIMER indicator and to set the TIMER STANDBY mode to off.

For Example:Recording a programme on channel 8 from 12:05 to 13:05 on December 25th.

1 Press **START MENU** to display the "START MENU" screen.

2 Press ▲/▼/◀/▶ to select "TIMER PROGRAM/CHECK", then press **SET/ENTER**.

```
SHOWV I EW
T I MER




▲ ▼ : SELECT
ENTER : ENTER        : RETURN
```
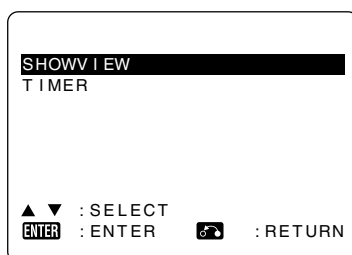
3 Press ▲/▼ to select "TIMER", then press **SET/ENTER**.

```
                        1 / 4
DATE  PR START  STOP
-- / -- --  - --   - : -- ---
-- / -- --  - : --  - : -- ---
-- / -- --  - : --  - : -- ---
-- / -- --  - : --  - : -- ---
        ▼ ▼  2 / 4  ▼ ▼
ERASE : CANCEL
▲ ▼ : SELECT
ENTER : ENTER        : RETURN
```
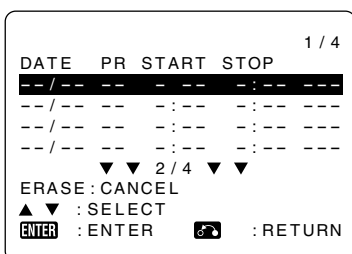
4 Press **SET/ENTER** to display today's date.

```
                        1 / 4
DATE  PR START  STOP
25/12 --  - --   - : -- F*H
-- / -- --  - : --  - : -- ---
-- / -- --  - : --  - : -- ---
-- / -- --  - : --  - : -- ---

DATE  : DAY / MONTH
◀ ▶ : SELECT   ▲ ▼ : CHANGE
ENTER : ENTER        : RETURN
```
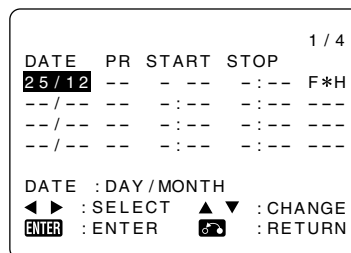
- Press ▲/▼ or **Number buttons** to change the date if you want.
- If you use the **Number buttons**, enter two digits for the day, then two for the month. For example for December 25th, press **2 5** (25th), then **1 2** (December).

5 When the correct date for your recording is shown, press ▶ to move to the next setting.

```
                        1 / 4
DATE  PR START  STOP
25/12 --  - : --   - : -- F*H
-- / -- --  - : --  - : -- ---
-- / -- --  - : --  - : -- ---
-- / -- --  - : --  - : -- ---
 : ONCE
W : WEEKLY       D : DAILY
◀ ▶ : SELECT   ▲ ▼ : CHANGE
ENTER : ENTER        : RETURN
```
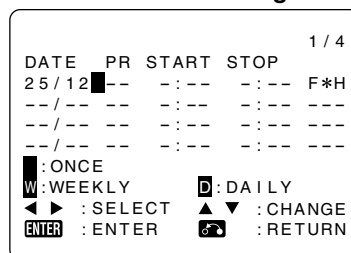
6 If you want to make additional recordings at the same time each day or week, press ▲/▼ to select "D"(DAILY) or "W"(WEEKLY). Then press ▶ to move to the next setting.

7 Press ▲/▼ or the **Number buttons** to enter the channel number. Then press ▶ to move to the next setting.
- For example to record a programme on channel 8, press **0 8**.

8 Press ▲/▼ or the **Number buttons** to enter the start time, hours first, then minutes then press ▶.
- When entering less than 10 hours or minutes add a "0" before the number, for example for 12:05 start, press **1 2 0 5**.

```
                        1 / 4
DATE  PR START  STOP
25/12W 8 12 : 05 12:05 F*H
-- / -- --  - : --  - : -- ---
-- / -- --  - : --  - : -- ---
-- / -- --  - : --  - : -- ---

◀ ▶ : SELECT   ▲ ▼ : CHANGE
ENTER : ENTER        : RETURN
```
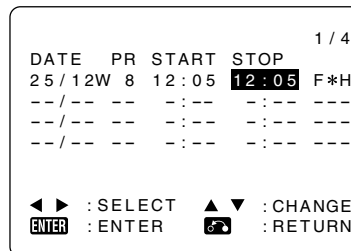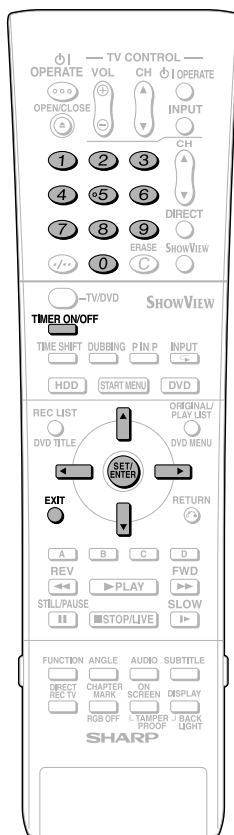
9 **Press ▲/▼ or the Number buttons to enter the stop time, then press ►.**
   • For example for 13:05 stop, press **1 3 0 5**.

```
■REC. MODE
  F:FINE  S:SP  L:LP  E:EP
  M:MANUAL ( 1~32 )→16
VPS/PDC
  *:ON   −:OFF
REC. MEDIA
  H:HDD   D:DVD
▲ ▼ :SELECT   ◄ ► :CHANGE
ENTER :ENTER        :RETURN
```

10 **Press ▲/▼ to select "REC. MODE", then use ◄/► to select the recording mode.**

   When "M:MANUAL (1~32)" is selected:
   • Select the recording mode with ◄/►, then press **SET/ENTER**. (The recording mode can be selected from 32 levels.)
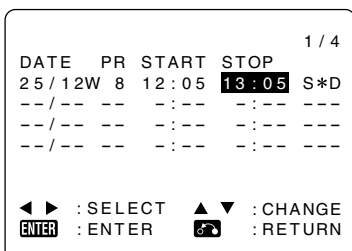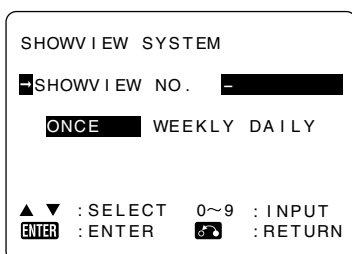
11 **Press ▲/▼ to select "VPS/PDC", then use ◄/► to turn the VPS/PDC setting ON("*")/OFF ("-").**

12 **Press ▲/▼ to select "REC. MEDIA", then use ◄/► to select the recording disc ("H:HDD" or "D:DVD"), then press SET/ENTER.**

```
                         1 / 4
DATE  PR START  STOP
25/12W  8 12:05  13:05  S*D
––/––  ––  ––:––  ––:––  –––
––/––  ––  ––:––  ––:––  –––
––/––  ––  ––:––  ––:––  –––
          ▼ ▼ 2/4 ▼ ▼
ERASE:CANCEL
▲ ▼ :SELECT
ENTER :ENTER        :RETURN
```

   • If any more timer recordings are to be set, repeat step **4** to **12**.

13 **When you have completed entering the timer settings, press START MENU or EXIT to exit from the "START MENU" screen.**

14 **(When you select "D:DVD" in step 12, ensure the recordable DVD-RW/R is inserted into the Recorder) Press TIMER ON/OFF to place the Recorder in TIMER STANDBY mode.**
   • The TIMER indicator on the front of the Recorder lights up.
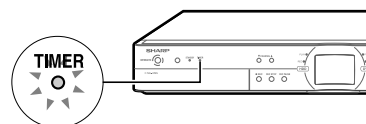
   • The channel cannot be changed during TIMER STANDBY mode. To change the channel, set TIMER STANDBY to off.

• VPS/PDC is a signal broadcast by some TV stations which adjusts the start and stop time of your Recorder recording. This ensures that if there is a change in broadcast time for your programme the Recorder will still record the whole programme.
  It is essential that the start time as it appears in the TV listing is used to programme the Recorder, as this information is used to identify the VPS/PDC signal corresponding to your programme.
• Even if recording by timer programming is completed, since the Recorder is VPS/PDC system compatible, the power may remain on internally (blue background output, LCD backlight off), but it will be turned off around 4 AM the next day or three hours after recording is complete.
• Data is still written to the disc after first timer recording is stopped, the first part of the next programme may not be recorded.
• During recording, press **REC STOP** to cancel the recording. If there are further recordings to be made, the Recorder will not return to TIMER STANDBY mode.
• When you set a DVD as recording media, timer recording will not start during disc playback. If "ALTERNATE RECORDING" is set to "YES", the programme will be timer recorded to HDD.
• Timer recording will not start during dubbing.
• Manual recording and editing cannot be performed during timer standby.

Confirm, Change and Cancel a Timer Programme

HDD DVD-RW DVD-RW DVD-R
       VR MODE   VIDEO MODE

The operation method is the same for both HDD and DVD.

Confirming

You can confirm on the Timer setting screen a list of all timer programmes that are already set.

Preparations for timer confirmation
• If the TIMER indicator on the front of the Recorder is lit, press **TIMER ON/OFF** to turn off the TIMER indicator and to set the TIMER STANDBY mode to off.

1 **Press START MENU to display the "START MENU" screen.**

2 **Press ▲/▼ / ◀/▶ to select "TIMER PROGRAM/CHECK", then press SET/ENTER.**

3 **Press ▲/▼ to select "TIMER". Press SET/ENTER to confirm.**
• All the timer recordings in the Recorder's memory will be shown.

```
                                1 / 4
DATE   PR  START   STOP
2 5 / 1 2W  8  1 2 : 0 5  1 3 : 0 5  S∗D
– – / – –  – –   – : – –    – : – –  – – –
– – / – –  – –   – : – –    – : – –  – – –
– – / – –  – –   – : – –    – : – –  – – –
          ▼ ▼  2 / 4  ▼ ▼
ERASE : CANCEL
▲ ▼  : SELECT
ENTER  : ENTER      📞    : RETURN
```

4 **If the settings are correct, press START MENU or EXIT to exit.**

Changing

1 **Follow steps *1* to *3* of "Confirming" described left.**

2 **Press ▲/▼ to highlight the timer recording you want to change, then press SET/ENTER to select.**

3 **Press ◀/▶ to highlight the setting to be changed and correct it by using ▲/▼ / ◀/▶ or the Number buttons.**

```
                                1 / 4
DATE   PR  START   STOP
2 6 / 1 2W  8  1 2 : 0 5  1 3 : 0 5  S∗D
– – / – –  – –   – : – –    – : – –  – – –
– – / – –  – –   – : – –    – : – –  – – –
          ▼ ▼  2 / 4  ▼ ▼
ERASE : CANCEL
▲ ▼  : SELECT
ENTER  : ENTER      📞    : RETURN
```

4 **When all corrections are complete press SET/ENTER to confirm, then press START MENU or EXIT to exit.**

Cancelling

1 **Follow steps *1* to *3* of "Confirming" described left.**

2 **Press ▲/▼ to highlight the timer recording to be cancelled, then press ERASE.**

```
                                1 / 4
DATE   PR  START   STOP
– – / – –  – –   – : – –    – : – –  – – –
– – / – –  – –   – : – –    – : – –  – – –
– – / – –  – –   – : – –    – : – –  – – –
– – / – –  – –   – : – –    – : – –  – – –
          ▼ ▼  2 / 4  ▼ ▼
ERASE : CANCEL
▲ ▼  : SELECT
ENTER  : ENTER      📞    : RETURN
```

3 **Press START MENU or EXIT to exit.**

📄 **NOTE**
• If there are some programmes to be recorded, do not forget to press **TIMER ON/OFF** to return the Recorder to TIMER STANDBY mode.

Dubbing (HDD/DVD)

Dubbing Method and Dubbing Types

You can dub from HDD to DVD and DVD to HDD. It is recommended to dub important programmes recorded on HDD to DVD for safe keeping.

- Can dub up to five titles (programmes) in one session.
- Cannot dub programmes that are not recorded properly.

High Speed Dubbing

- Copy titles recorded to HDD without any change of image quality and recording length. This Recorder can perform high speed dubbing with no loss of image quality of data so there is no degradation.
- Time to dub varies according to the recording mode of title (programme) to dub or type of disc you use.
- When a blank 2X speed compatible disc is initialized with other DVD recorder, dubbing may be done at 1X speed even if high speed dubbing is selected.

Example: Approximate time it takes to dub when you dub programme 1 hour long

Required time	Recording Mode of Source Title			
	FINE	SP	LP	EP
Using a 2X-speed compatible disc	Approx. 30 min	Approx. 15 min	Approx. 7.5 min	Approx. 5 min
Using a 1X-speed compatible disc	Approx. 60 min	Approx. 30 min	Approx. 15 min	Approx. 10 min

- Even if DVD-R is compatible to 4X speed dubbing the Recorder will handle as disc compatible to 2X speed dubbing.
- If you perform high-speed dubbing of a "Copy Once" programme, dubbing will not be done at 2X-speed, even if you use a 2X-speed compatible disc.

Rate Conversion Dubbing (Constant Speed)

- Plays back titles of HDD and dubs to DVD-RW/R or plays back titles of DVD-RW/R and dubs to HDD.
- Selects picture quality (recording mode) for dubbing. You can select among 32 levels of recording modes so it is convenient when you want to fit the programmes into one disc.
- You can select among 32 levels of recording mode by using Manual setting but picture quality will not exceed the quality of original.
- Time to dub is about the same as time required to record the title in the beginning.

📄 **NOTE**
- You cannot operate other functions while dubbing.
  —Timer programming will not start while dubbing.
  —You cannot record to HDD or playback titles on HDD while dubbing.

Limitation during Dubbing

Stopping Dubbing in the Middle

- When dubbing "Copy Once" enabled programme from HDD to DVD-RW (CPRM compatible) is stopped in the middle, the part that was dubbed will be erased from HDD. If you restart the dubbing, you can dub the remaining part as a different title but overlap between title dubbed before and after the stop might be off.

Dubbing Titles Including "Copy Once" Enabled Programme

- When dubbing titles including "Copy Once" enabled programme on HDD to DVD-RW, use DVD-RW (VR mode) Ver. 1.1 CPRM compatible disc.
- "Copy Once" enabled programme recorded to HDD will move (recorded programme will be erased after the move) to DVD-RW. (You cannot dub in Video mode even if you use DVD-RW Ver. 1.1 CPRM compatible disc.)

📄 **NOTE**
- Even if you select "HIGH SPEED DUBBING", you may not be able to increase the speed of dubbing from 1X depending on titles you want to dub and type of disc.
- When title on HDD that includes "Copy Once" enabled title is divided into several chapters, you can add all the chapters to dubbing list by adding one of the chapters to dubbing list.

Dubbing Direction and Dubbing Speed

Dubbing Direction / Dubbing Speed	Constant Speed (Rate Conversion Dubbing)	High Speed (High Speed Dubbing)
HDD→DVD-RW (VR mode)	*1 ✕	*1 ✕
HDD→DVD-RW/R (Video mode)	✕	△
DVD-RW/R→HDD	*2 ✕	—

✕ Can dub.
— Cannot dub.
△ Can High Speed Dub the recorded title if it is recorded using "HI SP DUB PRIORITY".
*1 Can just move the original title if that title is "Copy Once" enabled.
*2 Cannot dub "Copy Once" enabled title.

Title Name and Chapter Mark Copied during Dubbing
• Title name and chapter mark are as follows:

Rate Conversion Dubbing	Title Name	Chapter Mark
HDD↔DVD (VR mode)	✕	✕
HDD→DVD (Video mode)	✕	*1 —
DVD (Video mode)→HDD	*2 ✕	—

High Speed Dubbing	Title Name	Chapter Mark
HDD→DVD (VR mode)	✕	✕
HDD→DVD (Video mode)	✕	*3 ✕

✕ Can dub.
— Cannot dub.
*1 Chapter mark of the dubbed title will not be copied when you dub from HDD to DVD-RW/R (Video mode) using rate conversion dubbing function. The chapters will be inserted according to the setting of auto chapter (either "10 min", "15 min", or "30 min").
*2 You cannot dub from a finalized DVD-RW/R (Video mode) to HDD.
*3 During dubbing from HDD to DVD-RW/R (Video mode) maximum chapter marks that could be dubbed using high speed dubbing is 99 per title.
• Thumbnail will not be dubbed.

High Speed Dubbing

Limitations on High Speed Dubbing when Dubbing from HDD to DVD (Video Mode)
• During high speed dubbing, you cannot monitor the programme being dubbed on the TV screen.
• If you stop high speed dubbing in the middle of process the recorded title might be erased.
• You cannot high speed dub from a play list.

"HIGH SPEED DUBBING PRIORITY" (page 89)
• This function enables high-speed dubbing in both Video mode and VR mode.
• If a title is recorded with "HI SP DUB PRIORITY" set to "NO", you cannot perform high-speed dubbing in Video mode. Use "RATE CONVERSION DUBBING" (page **46**). (This setting is unnecessary when performing high speed dubbing into VR mode.)
• Cancel "HIGH SPEED DUBBING PRIORITY" when you want to edit frames of programmes recorded to HDD using "HIGH SPEED DUBBING PRIORITY". You can edit the frames after the cancellation.
• You cannot set "HIGH SPEED DUBBING PRIORITY" again to the programme that cancelled "HIGH SPEED DUBBING PRIORITY" once.
• You cannot record 16:9 and 4:3 screen size images in one title.
• The Recorder continues to dub the title in same screen size when it started dubbing even in case the screen size of title changed in the middle.

• When you record a programme with bilingual broadcast with "HI SP DUB PRIORITY" set to "YES", either "L CH" or "R CH" audio is recorded. See page **93** for details.
• When recording 16:9 size image in LP, EP, or MN1-17 recording modes, the image will be recorded as 4:3 (squeezed).

Rate Conversion Dubbing

Limitation of Rate Conversion Dubbing
• "DOLBY VIRTUAL SURROUND" (page **62**) will be set to "OFF" when rate conversion dubbing is used.
• "DD OUTPUT LEVEL" (page **88**) is set to "NO" when rate conversion dubbing is used.
• The image might look longer vertically when you dub 16:9 image from HDD to DVD-RW/R (Video mode) using rate conversion dubbing. In such case, adjust TV setting to correct the playback image.
• Chapter marks might shift slightly when dubbed using rate conversion dubbing.

Dubbing from HDD to DVD

Limitation when Dubbing from HDD to DVD-RW/R (Video Mode)
You cannot dub from HDD to DVD-RW/R in following cases:
• Total number of titles in DVD-RW/R reached 99 or total number of chapters reached 999.
• HDD or DVD-RW/R is either recording or playing back.

Dubbing from DVD to HDD

You cannot dub from DVD-RW/R to HDD in following cases:
• Not enough HDD capacity. (When there is not enough capacity in HDD, the Recorder will continue the dubbing until there is no more capacity.)
• Total number of titles in HDD reached 199 or total number of chapters reached 999.
• HDD or DVD-RW/R is either recording or playing back.
• When you try to do this, dubbing will be suspended. When you dub a title that has both "Copy Once" and "Copy Freely" enabled programmes, only the "Copy Freely" enabled programme will be dubbed.
• You cannot dub a "Copy Once" enabled programme recorded on a DVD-RW to the HDD.

Dubbing from DVD to HDD
• You can only dub programmes of DVD-RW/R (VR mode) to HDD. You cannot dub a disc that used another recorder.
• You cannot dub a DVD-RW/R (Video mode) disc recorded with this Recorder after it has been finalized. If you cancel the finalization in DVD-RW (Video mode) disc, you can dub programmes.
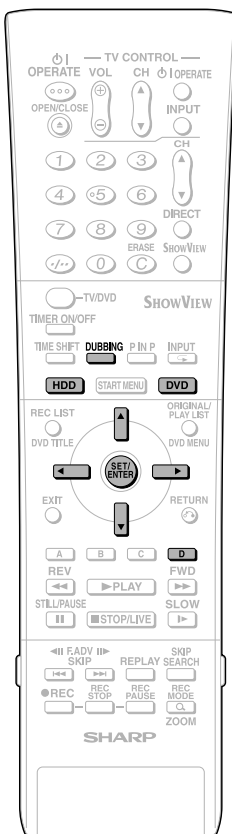
Dubbing (HDD↔DVD)/ High Speed Dubbing (HDD→DVD)

HDD	DVD-RW	DVD-RW	DVD-R
	VR MODE	VIDEO MODE	

- You can choose titles and chapters as the unit to dub.

1 When dubbing from HDD to DVD

Load a recordable disc onto the disc tray, then press HDD.
- Load the disc formatted in either VR mode or Video mode.
- The **HDD** button on the front of the Recorder lights up.

When dubbing from DVD to HDD

Load a disc that recorded the title you want to dub, then press DVD.
- The **DVD** button on the front of the Recorder lights up.

2 Press DUBBING.
- You can select "DUBBING" in START MENU to dub.
- Screen of step **4** will display when you dub from DVD to HDD.

3 Press ▲/▼ to select "HIGH SPEED DUBBING" or "RATE CONVERSION DUBBING", then press SET/ENTER.
- Screen of step **5** will display when you select "HIGH SPEED DUBBING".

Dubbing from HDD to DVD
- When the DVD-RW/R is in Video mode, if a title has been recorded with HI SP DUB PRIORITY setting set to "NO", then select "RATE CONVERSION DUBBING".

4 Press ▲/▼ to select the recording mode (picture quality), then press SET/ENTER.

DUBBING (HDD ORIGINAL → DVD)	25/12 10:28
SELECT THE RECORDING MODE.	
FINE (HIGH QUALITY)	
SP (STANDARD)	
LP (2X)	
EP (3X)	
MANUAL SETTING (MN)	ABLE TO MANUALLY SELECT 1 OF 32 LEVELS.
EXACT DUBBING	SELECT PICTURE QUALITY BASED ON REMAINING DVD CAPACITY.
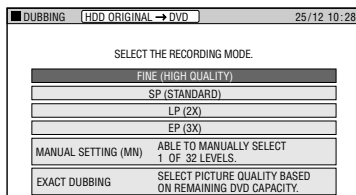
- You cannot select "EXACT DUBBING" when you dub from DVD to HDD.

When "MANUAL SETTING (MN)" is selected:
- Set picture quality with ◀/▶, then press **SET/ENTER**. (Picture quality can be selected from 32 levels.)

DUBBING (HDD ORIGINAL → DVD)	25/12 10:28
ABLE TO SELECT 1 OF 32 LEVELS OF PICTURE QUALITY IN MANUAL REC. MODE BASED ON REMAINING CAPACITY.	
EP LP SP FINE	
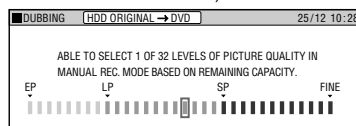
Selecting Exact Dubbing
- Select Exact Dubbing when there are multiple titles (up to 5) you want to dub and you know you cannot fit all into one disc. The Recorder will select the appropriate recording mode and fit all titles into one disc (maximum 6 hours).
- You cannot set recording mode to each titles when you select exact dubbing.
- You cannot dub titles in higher quality than the original.
- The Recorder will lower the recording mode where there is not enough capacity in the disc to dub compared to the length of all the titles (programmes). Be aware that original "Copy Once" enabled programme will be erased after dubbing.

5 Press ▲/▼ / ◀/▶ to select the title to dub, then press SET/ENTER.
- Setting toggles between "dubbing" and "dubbing cancelled" each time you press **SET/ENTER**.
- Select more titles when you want to dub multiple titles. (You can dub up to 5 titles at once.)

DUBBING (HDD ORIGINAL → DVD)	25/12 10:28
SELECTED TIME: 0h 10m	DVD REMAN: 2h10m
TITLE: PR33 FINE	
TITLE INFO: 5/10 TUE 22:00 ~ 23:00	
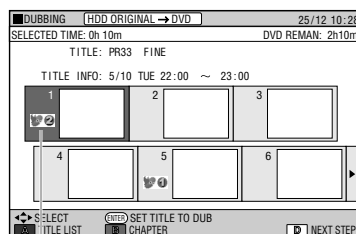
Dubbing mark displays to selected titles. Numbers will be assigned in order of selection and dubbing will start according to the numbers assigned.

6 Press Yellow (D) (NEXT STEP).

7 Press SET/ENTER at the confirmation screen.
- Dubbing start.
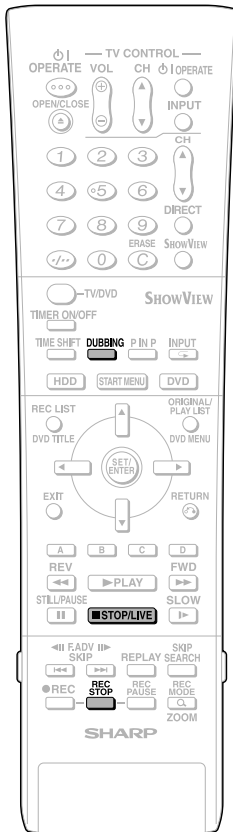
To Stop Dubbing

Press DUBBING.

- You can also stop dubbing by pressing ■**STOP/LIVE** or **REC STOP**.

📄 **NOTE**

Dubbing Titles Recorded to HDD to Multiple DVDs

- Operate Edit (page **74**) to create Play List and dub Play List as a unit. (Example: Dubbing programmes more than 6 hours long like a Christmas special in recording mode you set.) If the original is dubbed as is using a recording mode other than "EXACT DUBBING", the title will be dubbed (moved) until the disc is full. (For a "Copy Once" enabled programme, the dubbed part will be erased automatically from the HDD.) Take out the dubbed disc and load a new one to continue dubbing.
- In case you want to divide and dub a "Copy Once" enabled programme to several discs, stop dubbing manually and reload the disc.

Front Panel Display during Dubbing

- PLAY indicator of media of original source and REC indicator of media to dub light up during dubbing.
- Front display panel shows dubbing movement in orange during dubbing.

Example: Dubbing a programme from HDD to DVD.

Dubbing indicator
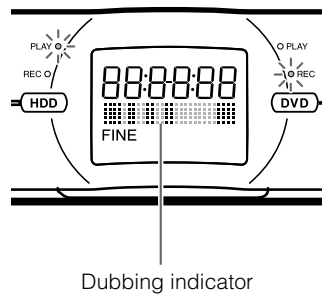
Eliminating problems (Recording, Timer Recording, Dubbing)

When You Cannot Record

Problem	Suggested Solution
• No disc in the Recorder. • Unrecordable disc is loaded.	• Load recordable DVD.
• Not enough disc capacity. • Recorder cannot identify the disc.	• Load recordable DVD with enough capacity.
• Disc is protected.	• Cancel disc protection or change to new DVD for recording.
• Not enough HDD capacity.	• Erase recorded programmes you don't want from HDD to create necessary capacity to record.
• In the middle of dubbing.	• You cannot record during dubbing. Stop dubbing before recording.

When You Cannot Dub

Problem	Suggested Solution
• Title protection is set to copy once enabled title (programme).	• You cannot dub Copy Once enabled title (programme) that is title protected.
• No disc in the Recorder. • Unrecordable disc is loaded.	• Load recordable DVD.
• Not enough disc capacity. • Recorder cannot identify the disc.	• Load recordable DVD with enough capacity.
• Disc is protected.	• Cancel disc protection or change to new recordable DVD.
• Not enough HDD capacity.	• Erase recorded programmes you don't want from HDD to create necessary capacity to record.
• In the middle of recording/playback.	• You cannot dub during recording/playback.
• Recorded "Copy Once" enabled title (programme) to DVD.	• "Copy Once" enabled title (programme) or title with signal that prohibits copying recorded to DVD cannot be dubbed to HDD.

When You Cannot High Speed Dub

Problem	Suggested Solution
• No disc in the Recorder. • Unrecordable disc is loaded.	• Load recordable DVD.
• Not enough disc capacity. • Recorder cannot identify the disc.	• Load recordable DVD with enough capacity.
• Disc is protected.	• Cancel disc protection or change to new recordable DVD.
• Trying to high speed dub from HDD to DVD in Video mode.	• You cannot high speed dub from HDD to DVD in Video mode if "HI SP DUB PRIORITY" was not set to "YES" when the original title was recorded to HDD.
• Cannot High Speed Dub although "HIGH SPEED DUBBING" is selected.	• Use 2X-speed compatible disc. • High speed dubbing of "Copy Once" enabled title will take longer than normal high speed dubbing.

Eliminating problems (Recording, Timer Recording, Dubbing)

When You Cannot Timer Record

Problem	Suggested Solution
• No disc in the Recorder.	• Load recordable DVD.
• Unrecordable disc is loaded. • Not enough disc capacity. • Recorder cannot identify the disc.	• Load recordable DVD with enough capacity.
• Disc is protected.	• Cancel disc protection or change to new recordable DVD for recording.
• Not enough HDD capacity.	• Erase recorded programmes you don't want from HDD to create necessary capacity to record.
• Number of timer programmes set has reached the limit.	• Erase unnecessary timer programmes.
• Dubbing recorded title.	• Timer recording does not work during dubbing. Stop dubbing before timer recording.
• Playing back the DVD.	• Stop playing back the DVD more than 3 minutes before timer recording starts. If you don't stop playback until timer recording start time, timer recording will not start.
• In the middle of direct recording.	• Timer recording does not function during direct recording. Stop direct recording before the preset start time for timer recording.

🗋 **NOTE**

• If you set multiple timers, and the programmed times overlap, or the end time of the previous timer is the same as the start time of the next timer, timer recording will begin after the preceding timer recording finishes. There will be a delay of up to 1 minute before the next timer recording begins.

HDD Playback
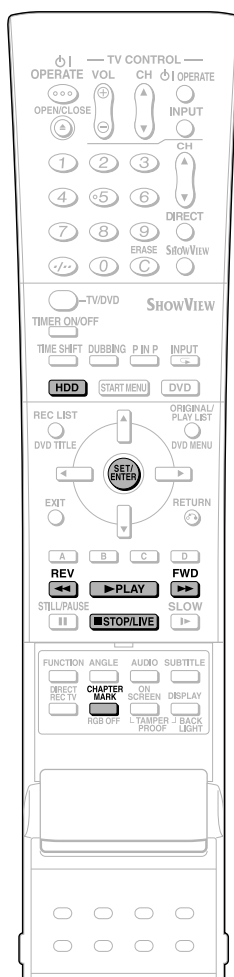
REC LIST: If you select the programme you want to watch from the list of recorded programmes (REC LIST) and press **SET/ ENTER**, playback will begin.

> **NOTE**
> • To display the counter during playback, press **ON SCREEN** (page **28**).
>
> **To playback edited video:**
> • When playing back video which has been edited (for example, by making a play list), use Seamless Playback for smoother connection between scenes.
> • For details on Seamless Playback settings, see page **89**.

Playback

HDD

1 Press **HDD** to select HDD mode.
   • The **HDD** button on the front of the Recorder lights up.
   • HDD mode is selected automatically when the power is turned on.

```
SWITCHED TO HDD MODE.
```

> **NOTE**
> • To playback a play list created by editing, press **ORIGINAL/PLAY LIST**.
>   Each time this button is pressed, the setting will toggle between "ORIGINAL" (original titles) and "PLAY LIST".

2 Press ▶PLAY.
   • PLAY indicator (for HDD) on the front of Recorder is lit green during playback.

```
HDD
ORIGINAL
FINE REMAIN 18h59m
T  1 / 38
C  4 / 6
▶ 0 0 : 2 0 : 0 0
```
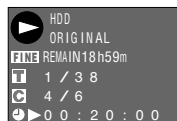
   • To fast forward or fast reverse: Press ▶▶**FWD** or ◀◀**REV** during playback. Each time these buttons are pressed, the speed cycles through the following settings:
     Press ▶**PLAY** to return to normal playback.

(Approx. 2×) (Approx. 8×) (Approx. 32×)
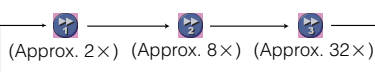
3 Press ■**STOP/LIVE** to stop playback.

> **NOTE**
> • The final few seconds may not be played back, depending on how the recording was stopped.
> • The end position of the programme played back may be shifted slightly from the position where recording was stopped during recording.

Resume playback function

• If you press ▶**PLAY** again, playback will resume from the point where it was previously stopped.
• To playback from the beginning, press ■**STOP/LIVE** again and then press ▶**PLAY**.

Inserting Chapter Marks during Playback

• You can insert chapter marks by pressing **CHAPTER MARK** (under the cover). Chapter marks are inserted after the message "RECORDED CHAPTER MARK." appears.
• You cannot insert chapter marks during Simultaneous Recording/Playback.
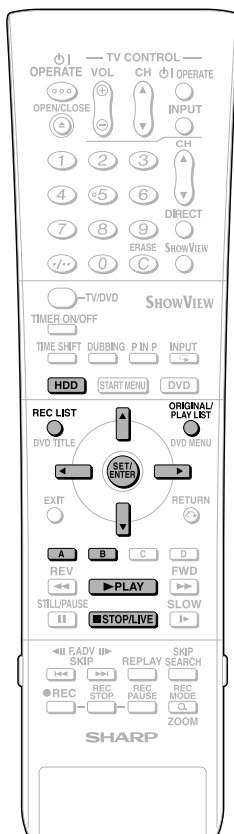
Playback from REC LIST

HDD

1 Press HDD to select HDD mode.
- The **HDD** button on the front of the Recorder lights up.
- HDD mode is selected automatically when the power is turned on.

2 Press REC LIST to display REC LIST (THUMBNAIL).
- The REC LIST can also be displayed from the START MENU (see page **24**).
- To switch between Original Title List and Play List, press **ORIGINAL/PLAY LIST**. Each time the button is pressed, "ORIGINAL" (original titles) or "PLAY LIST" is selected in turn.

ORIGINAL ⇄ PLAY LIST

```
■ REC LIST(HDD ORIGINAL)                    25/12 10:28
       TITLE: PR33 FINE
   TITLE INFO: 2/10 SAT 20:00  ~  21:00
   ┌────┐   ┌────┐   ┌────┐
   │ 1  │   │ 2  │   │ 3  │
   └────┘   └────┘   └────┘
   ┌────┐   ┌────┐   ┌────┐
   │ 4  │   │ 5  │   │ 6  │     ▶
   └────┘   └────┘   └────┘
```
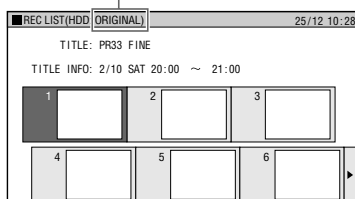
- If you press **Blue (A)** (TITLE LIST), you can switch to title list.

TITLE LIST

```
■ REC LIST(HDD ORIGINAL)                    25/12 10:28
       TITLE: PR33 FINE
   TITLE INFO: 2/10 SAT 20:00  ~  21:00

▲ BACK        TITLE      REC. DATE    START   TIME
 1    PR33 FINE          2/10 SAT    20:00   60 MIN
 2    PR33 FINE          9/10 SAT    20:00   60 MIN
 3    PR33 FINE         16/10 SAT    20:00   60 MIN
 4    PR33 FINE         23/10 SAT    20:00   60 MIN
 5    PR33 FINE         30/10 SAT    20:00   60 MIN
 6    PR33 FINE          6/11 SAT    20:00   60 MIN
▼ NEXT        FROM NEW
    ↕ SELECT    (ENTER) ENTER    (↩) RETURN
  [A] THUMBNAIL   [B] SORT           [D] FUNC. MENU
```

- Press **Blue (A)** (THUMBNAIL) to switch from title list to thumbnail.

3 Press ▲ / ▼ / ◀ / ▶ to select the programme you want to watch.

Thumbnail screen: Press ▲ / ▼ to switch pages.

Title Name List screen: Press ▲ / ▼ to select a title name.

4 Press SET/ENTER or ▶PLAY.
- Playback begins.

To Stop Playback
Press ■STOP/LIVE.

About REC LIST
When the REC LIST is displayed, you can use the following functions by pressing **Blue (A)** or **Red (B)** on the remote control.

- Switch between Thumbnail screen and Title Name List screen by pressing **Blue (A)**.
- When Thumbnail screen is selected, switch between Title List and Chapter List by pressing **Red (B)**.
  Chapters in selected title will be displayed in Chapter List.
- Sort the Title List in the "From New", "From Old" or "Title Name (alphabetical)" order.
  ① Press **Red (B)**.
  ② Press ◀ / ▶ to select "FROM NEW", "FROM OLD" or "TITLE NAME", then press **SET/ENTER**.

Icons Displayed in Title Info Field of REC LIST

NEW	NEW TITLE Displays HDD only. (Will not display in case you playback, edit, or set Title Protection.)
🔒	TITLE PROTECTION (HDD, DVD-RW [VR mode] only)
↳⊙	"Copy Once" enabled Programme (Copy Restricted) (HDD only)
⊙	High Speed Dubbing Priority setting (HDD only)

HDD Playback
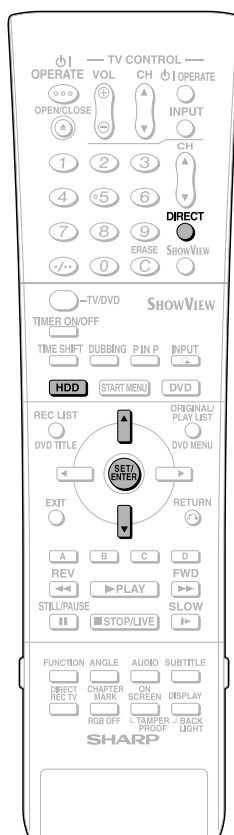
Playback by Selecting Title Number (Direct Playback)

HDD

You can start playback from the title you want to see.

1 Press HDD to select HDD mode.
• The **HDD** button on the front of the Recorder lights up.

2 Press DIRECT while playback stops or during playback.

3 Press ▲ / ▼ to select the title number you want to see, then press SET/ENTER.

Title number currently selected

```
📺  1 / 38
```

• Playback starts from the beginning of the selected title.

📄 **NOTE**
• You can select the title number to play back by using Function Control screen (page **61**).
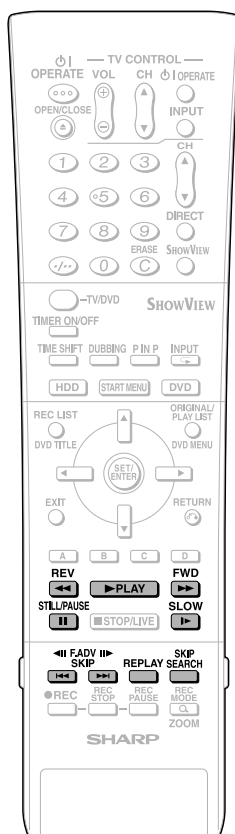
Other Types of Playback

HDD

• This section explains other types of HDD playback operations.

Fast Forward/Reverse (Search)

Use to fast forward/reverse programmes being played.

1 **Press ▶▶FWD or ◀◀REV during playback.**
Example: When ▶▶FWD is pressed
• The search speed will cycle as follows each time you press the button.

(Approx. 2×) (Approx. 8×) (Approx. 32×)
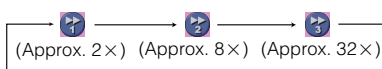
2 **Press ▶PLAY to cancel the search.**
• Search will be cancelled and playback screen displays.
• You cannot fast forward or fast reverse from one title and continue to another title.
• When you fast forward or fast reverse to the end or beginning of the title, normal playback screen displays automatically.

Skipping to Next Chapter

You can skip the chapter using this function.

Press ◀◀ or ▶▶ during playback.
• Press ▶▶ to go to the start of the next chapter.
• Press ◀◀ once to return to the start of current chapter (track). If you press it again (within about 5 seconds), it will skip to the beginning of the previous chapter (track).
• This function does not work during Time Shift Viewing.

Slow Playback

This lets you playback video at slow speed.

1 **Press I▶SLOW during playback.**
• The slow playback speed will cycle as follows each time you press the button.

(Approx. 1/2×) (Approx. 1/8×) (Approx. 1/16×)
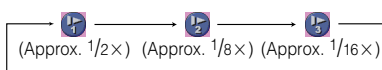
2 **Press ▶PLAY to return to normal playback.**
• You cannot perform slow playback over a boundary between titles. At the end of the title, slow playback will be cancelled and normal playback will be selected automatically.

Still Picture Playback/ Frame Advance Playback

This feature enables still playback and frame advance playback.

1 **Press ❙❙STILL/PAUSE during playback.**
• Playback pauses.
• PLAY indicator (for HDD) on the front of Recorder blinks during Still Picture Playback.

2 **Press ▶▶❙ or ❙◀◀ to advance or reverse playback image frame by frame.**
• Press ▶▶❙ to advance one frame. Press ❙◀◀ to reverse one frame.

3 **Press ▶PLAY to return to normal playback.**

Skip Search

This lets you skip about 30 seconds ahead. This is convenient when you want to skip commercials while viewing.

Press SKIP SEARCH during play-back.
• You can skip approximately 30 seconds forward each time you press the button.
• The maximum interval you can skip at one time is 120 seconds (4 button presses).
• Skip Search will not work during Time Shift Viewing.

Replay

This lets you skip about 10 seconds back. This is convenient for replaying a short scene you missed.

Press REPLAY during playback.
• Playback reverses approximately 10 seconds, then starts again.
• Replay will not work during Time Shift Viewing.

HDD Playback

Switching Audio

You can change the audio output channel during HDD playback.

Each time **AUDIO** is pressed, the audio channels change.

• The way audio channels change differs depending on the sound recorded on HDD. See the table on page **93** for details.

◻ NOTE

• When you play a programme recorded in stereo or monaural, and if you are listening to the BIT STREAM sound via the digital output jack, you cannot select the audio channel. Set "DIGITAL AUDIO OUT" to "PCM" (see page **88**), or if you want to change the audio channel, listen via the analogue output jacks.

Zoom

You can magnify your favorite section.

Press ◌ **ZOOM** during playback.
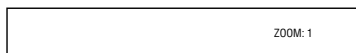
```
                          ZOOM: 1
```

• Each time you press this button, the zoom setting cycles in the following sequence: ZOOM: 1 (approx. 1.2✗) → ZOOM: 2 (approx. 1.5✗) → ZOOM: 3 (approx. 2.0✗) → OFF: (No display).
• You can move the enlarged part with ▲/▼/◀/▶.
• Zoom will not work during Time Shift Viewing.

To return to the normal screen, press ◌**ZOOM** a few times and cancel Zoom mode.

Repeat Playback of a Title or Chapter (Repeat Playback)

1 Play back the title or chapter you want to repeat.

2 Press ⟳ **(INPUT)**.

3 Press ◀/▶ to select the type of Repeat Playback.
   • **TITLE:** Repeats the title currently playing back.
   • **CHAPTER:** Repeats the chapter currently playing back.
   • **A-B:** Repeats the specified scene of title or chapter.

```
┌─────────────────────────────────────┐
│  SELECT TYPE OF REPEAT PLAYBACK.     │
│  ┌────────┐ ┌─────────┐ ┌──────┐    │
│  │ TITLE  │ │ CHAPTER │ │ A-B  │    │
│  └────────┘ └─────────┘ └──────┘    │
│  ◀▶ SELECT   (ENTER) ENTER          │
└─────────────────────────────────────┘
```

• Press **RETURN** to cancel without setting the type of Repeat Playback.

4 Press **SET/ENTER**.
Example: Repeat playback of a title (TITLE)

```
┌─────────────────────────────────────┐
│                                     │
│       ⟲ TITLE REPEAT                │
│                                     │
└─────────────────────────────────────┘
```

5 Press ⟳ **(INPUT)** to return to normal playback.

A-B Repeat Playback (Repeat Playback of a Specified Part)

1 Press ⟳ **(INPUT)** during playback.

2 Press ◀/▶ to select "A-B", then press **SET/ENTER**.

3 Press **SET/ENTER** when you reach the scene you want to start Repeat Playback.
   • The start point of the part (A) will be memorized.

```
┌─────────────────────────────────────┐
│  SELECT TYPE OF REPEAT PLAYBACK.     │
│  ┌────────┐ ┌─────────┐ ┌──────┐    │
│  │ TITLE  │ │ CHAPTER │ │ A-B  │    │
│  └────────┘ └─────────┘ └──────┘    │
│                    SET START PT     │
│  (ENTER) SET REPEAT START POINT     │
└─────────────────────────────────────┘
```

4 Press **SET/ENTER** when you reach the scene you want to end Repeat Playback.
   • The end point of the part (B) will be memorized and the Repeat Playback for the specified part (A-B) starts.

5 Press ⟳ **(INPUT)** to return to normal playback.

◻ NOTE

• For A-B Repeat Playback, set the start and end points within the same title.

DVD/CD Playback
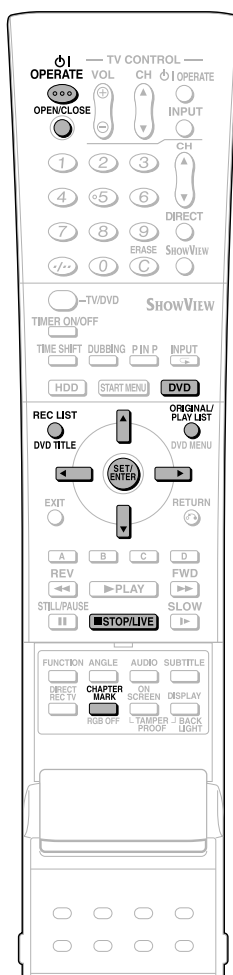
This section explains playback of DVD-RW/R discs recorded with this Recorder, commercially available DVD Video discs (like movies) and CDs.
- To playback a DVD-RW/R recorded with this Recorder, select the title to be played back, and then start playback.
- Display the list of initial images (thumbnails) for each title, and select a title. (REC LIST)

Loading Disc

1 Press OPERATE to turn the power on.

2 Press OPEN/CLOSE to open the disc tray.

OPEN/CLOSE

DVD
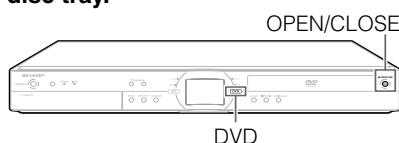
3 Load a disc on the disc tray.

- Insert the disc with the label face up.
- In case of disc recorded on both sides, face the side you want to view down.

4 Press OPEN/CLOSE to close the disc tray.

DVD-RW/R Playback

DVD-RW VR MODE   DVD-RW VIDEO MODE   DVD-R

1 Press DVD to select DVD mode.
- The **DVD** button on the front of the Recorder lights up.
- HDD mode is selected automatically when the power is turned on.

SWITCHED TO DVD/CD MODE.
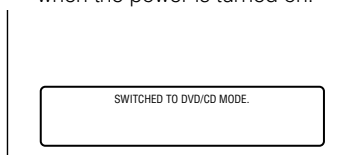
2 Load the disc you want to play back.

3 Press REC LIST to display the REC LIST (thumbnail) screen.
- See page **51** for details on how to use the REC LIST.
- If the loaded disc has a play list and you press **ORIGINAL/PLAY LIST**, the screen will switch to the play list (page **66**).

4 Press ▲/▼/◀/▶ to select the title (or chapter) you wish to view.

REC LIST(DVD ORIGINAL)   25/12 10:28

TITLE: PR33 FINE

TITLE INFO: 10/11 MON 16:00 ~ 16:10

1   2   3
4   5   6

5 Press SET/ENTER or ▶PLAY.
- Playback will begin from the selected title (chapter).
- PLAY indicator (for DVD) on the front of Recorder is lit green during playback.

6 To stop playback, press ■STOP/LIVE.

To Record a Chapter Mark during Playback

Press CHAPTER MARK (under the cover).
- The message "RECORDED CHAPTER MARK." is displayed, and the chapter mark is recorded.
- Chapter marks can be set during playback only with DVD-RW (VR mode).
- Chapter marks cannot be set manually for DVD-RW (Video mode), DVD-R or during Simultaneous Recording/Playback.

⌐ NOTE
- If a title was set with another DVD recorder, and it contains characters which cannot be displayed with this Recorder, then "∗∗∗∗⋯" is displayed (up to 64 characters max.).
- If you play back a play list on a disc recorded with another DVD recorder and 1 title is 12 hours or more in length, only 12 hours of that title will be played back.

Playback by Selecting Title

- To play back a disc recorded and finalized in Video mode, press **DVD TITLE**, display the TITLE LIST screen, and select a title to play back.

DVD-RW VIDEO MODE   DVD-R

1 Press DVD to select DVD mode.
- The **DVD** button on the front of the Recorder lights up.
- HDD mode is selected automatically when the power is turned on.

2 Load a disc recorded in Video mode.

3 Press DVD TITLE.
- The TITLE LIST screen is displayed.

DVD/CD Playback
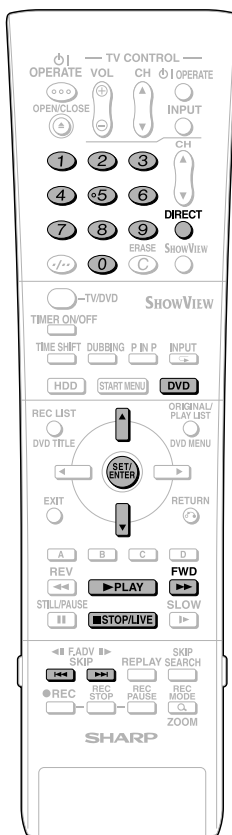
4 Press ▲/▼ to select the title.

5 Press **SET/ENTER.**
   • Playback of the selected title will begin.

6 To stop playback, press ■**STOP/ LIVE.**

📄 **NOTE**
• If a disc recorded in Video mode has been finalized (pages **13**, **95**), a menu screen will be created automatically to enable playback with other DVD players. For that reason, the menu screen is different before and after finalization.
• If a title was set with another DVD recorder, and it contains characters which cannot be displayed with this Recorder, then "✱✱✱✱····" is displayed (up to 64 characters max.).

If there is a timer programme which is set to record on DVD:
• A message to that effect will be displayed 5 minutes prior to the start of the timer recording. If that happens, stop DVD playback and load the disc for recording.
• The timer recording will be cancelled at the start time of the timer recording if DVD playback is still in progress.

Resume playback function
• If you press ▶**PLAY** next, playback will resume from the point where it stopped the previous time. To playback from the beginning, cancel resume mode by pressing ■**STOP/LIVE** then press ▶**PLAY**. (Resume playback will be cancelled when you open the disc tray, turn the power off, or switch to HDD.)
• Resume playback function does not work during video CD playback.

DVD Video Playback

DVD VIDEO

1 Press **DVD** and load a disc.
   • The **DVD** button on the front of the Recorder lights up.
   • Playback may begin automatically, depending on the disc.

2 Press ▶**PLAY.**
   • Playback begins from the first title.
   • The menu may be displayed first, depending on the disc. Perform playback operation by following the directions on the screen.
   • To stop playback, press ■**STOP/LIVE**.

Audio CD/Video CD Playback

VIDEO CD   **AUDIO CD**

Preparation

Press DVD and load a disc.
• The **DVD** button on the front of the Recorder lights up.

Playback from the beginning

1 Press ▶**PLAY.**
   • Playback begins from the first track.

2 To stop playback, press ■**STOP/ LIVE.**

Playback by selecting the track

1 ① Press **DIRECT.**
   ② Select the track number to be played back using the **Number** buttons, then press **SET/ ENTER.**
   • Playback starts from the selected track.
   Example: To select the 12th song (track), press **1**, then **2**.
   • You can also select the track by pressing ▲/▼.
   • DIRECT does not work when playing back a video CD with PBC on.

2 To stop playback, press ■**STOP/ LIVE.**

Video CD (with PBC) Playback

• Some video CD discs have Playback Control (PBC) function which guides the playback by the menu displayed.

Video CD (with PBC)
If you press ▶**PLAY** after you load a disc, the menu displays. The functions of button changes in the following manner during the playback operation using the menu.
• ▶▶❙ becomes the "NEXT" button.
• ❙◀◀ becomes the "PREVIOUS" button.
Select the track number to be played back from the menu using the **Number** buttons and play back the track.
Example: To select the 5th track, press **0**, then **5**.
(Operation method may differ depending on the disc. Refer to the manual of the video CD.)

Turning off PBC function when playing back a PBC compatible video CD
Playback begins from track 1 when ▶▶**FWD** is pressed before the menu is displayed after you load a disc. Playback will follow the track order like an audio CD.
* If you want to turn the PBC to "ON" when playing back the CD with PBC off, press ■**STOP/LIVE** twice and then press ▶**PLAY** to display the menu.
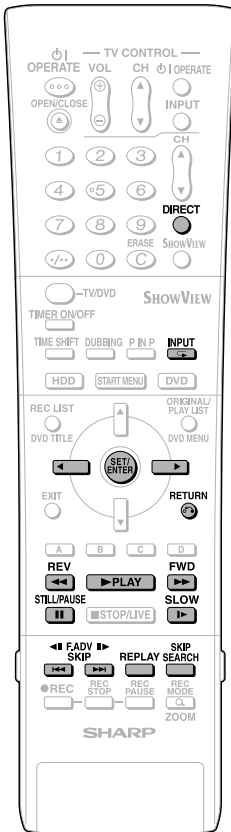
Other Types of Playback

| DVD-RW | DVD-RW | DVD-R | DVD VIDEO | VIDEO CD |
| VR MODE | VIDEO MODE | | | |

| AUDIO CD |

- This section explains other types of DVD playback operations.

Fast Forward/Reverse (Search)

Fast Forward/Reverse functions when ▶▶**FWD** or ◀◀**REV** is pressed during playback.

Example: When ▶▶**FWD** is pressed
- The search speed will cycle as follows each time you press the button.
  When playing back a DVD

(Approx. 2×) (Approx. 8×) (Approx. 32×)
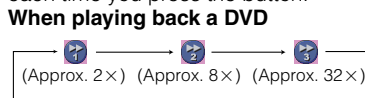
When playing back a video CD or audio CD

(Approx. 2×) (Approx. 8×)
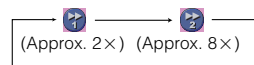
Skipping to the Beginning of a Chapter (Track)

Skipping (to the beginning of a chapter or track) functions when ▶▶ or ◀◀ is pressed during playback.

Slow Playback

Slow Playback functions when ▶**SLOW** is pressed during playback.

(Approx. 1/2×) (Approx. 1/8×) (Approx. 1/16×)
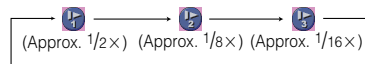
Still Picture Playback/ Frame Advance Playback

- Still Picture Playback functions when ▋▋**STILL/PAUSE** is pressed during playback. (If you are playing back an audio CD, the CD will pause.)
- Frame Advance/Reverse Playback functions when ▶▶ or ◀◀ is pressed during Still Picture Playback.
  - Frame Reverse Playback will not work with DVD-RW (Video mode), DVD-R, DVD Video and Video CD discs.
  - PLAY indicator (for DVD) on the front of Recorder blinks during Still Picture Playback.

Skip Search

Playback skips 30 seconds ahead when **SKIP SEARCH** is pressed during playback.

Replay

Playback reverses 10 seconds when **REPLAY** is pressed during playback.

Playback by Selecting a Title (Track) Number (Direct Playback)

Press **DIRECT**, then select title (track) number to play back. See page **52** for details.

Repeat Playback of a Title or Chapter (Repeat Playback)

1. **Play back the title or chapter you want to repeat.**

2. **Press ⤵ (INPUT).**

3. **Press ◀/▶ to select the type of Repeat Playback.**
   - **TITLE:** Repeats the title currently playing back.
   - **CHAPTER:** Repeats the chapter currently playing back.
   - **A-B:** Repeats the specified scene of title or chapter.

   SELECT TYPE OF REPEAT PLAYBACK.
   TITLE   CHAPTER   A-B
   ◀▶ SELECT   (ENTER) ENTER

   - Press **RETURN** to cancel without setting the type of Repeat Playback.

4. **Press SET/ENTER.**
   Example: Repeat playback of a title (TITLE)

   ⤵ TITLE REPEAT

5. **Press ⤵ (INPUT) to return to normal playback.**

A-B Repeat Playback (Repeat Playback of a Specified Part)

1. **Press ⤵ (INPUT) during playback.**

2. **Press ◀/▶ to select "A-B", then press SET/ENTER.**

3. **Press SET/ENTER when you reach the scene you want to start Repeat Playback.**
   - The start point of the part (A) will be memorized.

   SELECT TYPE OF REPEAT PLAYBACK.
   TITLE   CHAPTER   A-B
                       SET START PT
   (ENTER) SET REPEAT START POINT

DVD/CD Playback

4 **Press SET/ENTER when you reach the scene you want to end Repeat Playback.**
- The end point of the part (B) will be memorized and the Repeat Playback for the specified part (A-B) starts.

5 **Press ⤵ (INPUT) to return to normal playback.**

Function Control

You can do things like specify a title or chapter, and adjust settings for video and audio if you press **FUNCTION** (under the cover) during playback. (For details see page **61**.)

Switching Audio

You can change the audio output channel using the **AUDIO** button (under the cover).

Each time AUDIO is pressed, the audio channels change as follows:

AUDIO CD	VIDEO CD

$$\rightarrow L+R \longrightarrow L \longrightarrow R \rightarrow$$
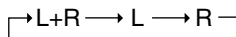
DVD VIDEO

The sound number which is currently played back will be displayed.

DVD-RW	DVD-RW	DVD-R
VR MODE	VIDEO MODE	

The sound you can select varies depending on the sound recorded on the disc. (page **93**)
- When recording bilingual broadcast or stereo, the way audio channel changes may differ depending on the recorded sound. See the table on page **93** for details.

▭ NOTE
- When you play a programme recorded in stereo or monaural, and if you are listening to the BIT STREAM sound via the digital output jack, you cannot select the audio channel. Set "DIGITAL AUDIO OUTPUT" to "PCM" (see page **88**), or if you want to change the audio channel, listen via the analogue output jacks.

Switching Subtitles

DVD VIDEO

If subtitles are provided in multiple languages, you can switch between them.

1 **Press SUBTITLE (under the cover) during playback.**
- The display indicates the subtitle number currently being played back, and the subtitles appear.
- "✕✕" is displayed if a disc has no subtitles.

2 **Press ▲/▼ to select the subtitles you want to see.**
- You can select by pressing **SUBTITLE**.
- The display indicates the subtitle number currently being played back, and the subtitles appear.
- To hide the subtitles, press ◀/▶ a few times and select "OFF". You can also select "OFF" by pressing **SUBTITLE** or ▲/▼.

Zoom

You can magnify your favorite section by pressing ⊙**ZOOM** during playback.
- Each time you press this button, the zoom setting cycles in the following sequence: ZOOM: 1 (approx. 1.2✕)→ZOOM: 2 (approx. 1.5✕)→ZOOM: 3 (approx. 2.0✕)→OFF (No display)
- You can move the enlarged part with ▲/▼/◀/▶.

```
                              ZOOM: 1
```
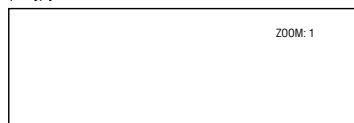
Switching Angle

DVD VIDEO

If multiple angles are recorded, you can switch between them.

Press ANGLE (under the cover) during playback.
- The display indicates the angle number currently being played back. Each time you press this button, the angle switches.
- The angle can also be switched by pressing ▲/▼.
- "✕✕" is displayed if a disc is recorded with only one angle.

```
                         ▨ 1
```

To return to the previous angle, press **ANGLE** (under the cover) a few times to select the original angle.

▭ NOTE
- The following operations will not work when playing back an audio CD:
  Slow Playback, Frame Advance/Reverse

Display of functions
- The display for subtitle, angle or audio automatically disappears after 10 seconds. The display can also be hidden by pressing **SET/ENTER**.

Switching between functions
- You can switch subtitle, angle and audio at the Function Control screen (page **61**).
- Operation for each function varies depending on the disc. See the manual for the disc.
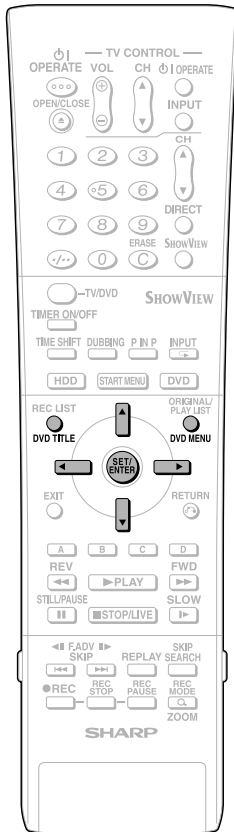
Fast Forward/Reverse
- You cannot perform Fast Forward/Fast Reverse over a boundary between titles. At the end or beginning of the title, Fast Forward/Fast Reverse will be cancelled and normal playback will be selected automatically.
- Audio is not played back during Fast Forward and Fast Reverse.
- Subtitles are not played back with DVD video discs and video CDs during Fast Forward and Fast Reverse.
- Depending on the disc and the scene being played back, the Recorder may not operate at the speed listed in this manual when performing Fast Forward.

Slow Playback
- You cannot perform Slow Playback over a boundary between titles. At the end of the title, Slow Playback will be cancelled and normal playback will be selected automatically.

Repeat Playback
- Repeat Playback will not work during PBC playback of a video CD with PBC (Play-back Control).
- Repeat Playback may be forbidden depending on the disc.
- A-B Repeat Playback may not work in multi-angle scenes.
- For A-B Repeat Playback, set the start and end points within the same title.

Playback by Selecting with the Menu in the DVD

DVD-RW VIDEO MODE   **DVD-R**   **DVD VIDEO**

- This section explains how to play back a DVD video disc with a top menu or disc menu.
- Titles listed in the title menu, and a disc guide (for options like subtitles and audio languages) are given in the disc menu.

Playback by Selecting a Title from the Title Menu

1 Press **DVD TITLE**.
- The title menu screen is displayed.

```
T I T L E   M E N U

1 Jazz        2 Latin

3 Classic     4 Rock
```

2 Press ▲/▼/◀/▶ to select the title, then press **SET/ENTER**.
- The selected title is played back.

📄 **NOTE**
- The procedure explained on this page is the basic operation procedure. Procedures vary depending on the DVD video disc, so operate by following the instructions in the DVD video disc manual, or the instructions displayed on the screen.
- A title menu is not displayed for a DVD-R/RW (Video mode) if it has not been finalized.

Title menu
- With some DVD discs, the title menu may be explained using the name "Top Menu". For the button explained as the top menu key, use **DVD TITLE** on the remote control.
- If no title menu is available, the title menu will not display even if **DVD TITLE** is pressed.

Using the Disc Menu

Example: Select "SUBTITLE LANGUAGE".

1 Press **DVD MENU**.

```
        MENU

1   AUDIO LANGUAGE
2   SUBTITLE LANGUAGE
3   AUDIO
```
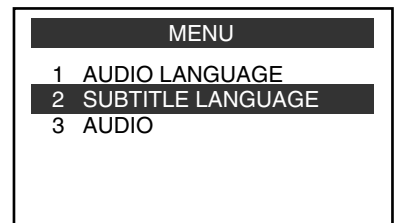
- The disc menu screen is displayed.

2 Press ▲/▼ to select "SUBTITLE LANGUAGE".

3 Press **SET/ENTER**.
- Screen to select subtitle language is displayed.

4 Press ▲/▼ to select the subtitle language.

```
     SUBTITLE LANGUAGE

1   English
2   Español
3   Français
```
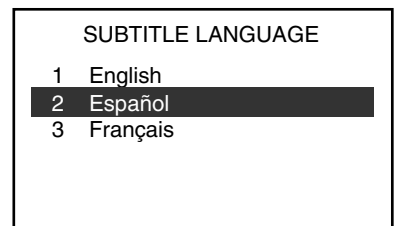
5 Press **SET/ENTER**.

MP3 File Playback
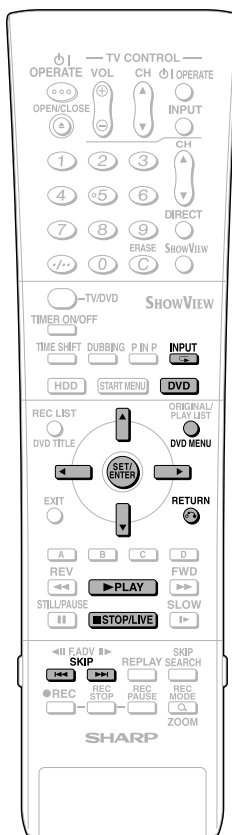
□ NOTE
- When the DV input is selected, discs cannot be played back if "DV LINK" is set to "ON". You can enjoy other sounds by switching to other channels.
- See page **10** for details about the MP3 file format.

1 **Press DVD to select DVD mode.**

2 **Load an MP3 recorded CD-R or the CD-RW, then press DVD MENU.**

3 **Press ▲/▼/◄/► to select the folder you want to play, then press SET/ENTER.**
   - The file (music title) in the folder is displayed on the file selection screen.
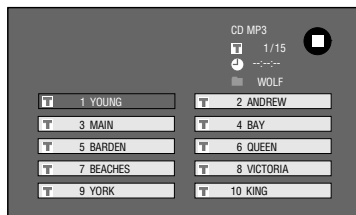
   - Press **RETURN** to return to the folder selection screen.
   - If you press ►**PLAY** after selecting the folder, the playback screen is displayed, and the files in that folder will be played from the beginning repeatedly.

4 **Press ▲/▼/◄/► to select the file (music title) you want to play and then press SET/ENTER.**
   - Playback will start from the selected file (music title).
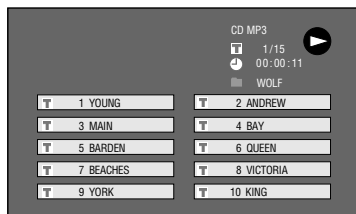
5 **Press ■STOP/LIVE to stop playback.**

To Play Another File (music title) during Playback

1 **Press ■STOP/LIVE to stop playback.**

2 **Press ▲/▼/◄/► to select the file (music title) you want to play, then press SET/ENTER.**
   - The chosen file (music title) will be played.

To Skip the File during Playback

Press SKIP►►I or I◄◄SKIP.
- Press **SKIP►►I** to skip forward.
- Press **I◄◄SKIP** to skip backward.

While the MP3 disc is playing

- Time Search is disabled.
- Programmed Playback is disabled.
- It is possible to repeat one track by pressing **(INPUT)**.
- Dolby Virtual Surround does not operate.

Settings During Playback
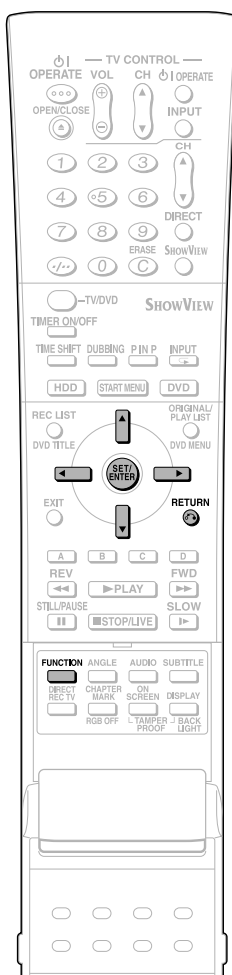
Function Control

HDD	DVD-RW		DVD-RW		DVD-R		DVD VIDEO
	VR MODE		VIDEO MODE				

This lets you make various settings at once, like subtitle and angle setting, and title selection for Direct Playback.
Depending on your preferences, you can adjust video and enjoy audio with a greater sense of presence. Operation is the same for HDD and DVD.

Function Control screen
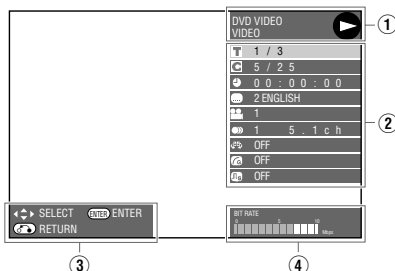
① **Playback status display**
Shows the operation status and the drive or disc type.

② **Setting items**
Selects a title or chapter for playback, or performs video/audio settings.

③ **Operation guide display**
Provides help on how to operate with the remote control buttons.

④ **Bit rate display**
Displays the data rate of the video appearing on the TV screen.

Function Control Operation Procedure

1 Press FUNCTION (under the cover) during playback.
• The Function Control screen is displayed on the TV.
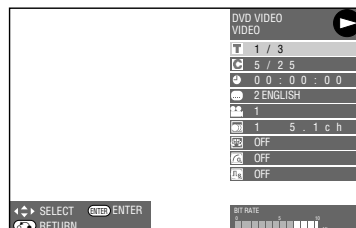
2 Press ▲/▼ to select setting items, then press SET/ENTER.
• For a description of each setting item, see "Functions which can be set" (page **62**).
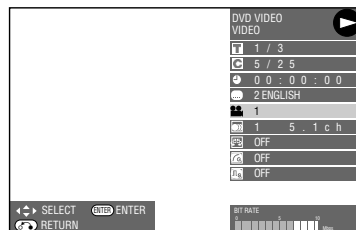
3 Press ▲/▼/◀/▶ to set, then press SET/ENTER.
• Operation may vary depending on the setting item. Operate by following the operation guide instructions on the screen.

4 Press RETURN or FUNCTION (under the cover) to close the Function Control screen.

NOTE
• If "✕✕" is displayed for an option like title number or subtitles, the disc has no titles or subtitles which can be selected.
• When you press **DIRECT** or **SUBTITLE**, the Function Control screen is closed.
• If you set to the Function Control screen during playback of a DVD video, it may be impossible to operate according to the instructions from the DVD video. In cases like this, operate again after cancelling the Function Control screen.

Settings During Playback

Functions which can be set

▼ Title Number (Direct Title Skip)
- Shows the title number being played back. You can skip to the start of the title.

C Chapter Number (Direct Chapter Skip)
- Shows the chapter number being played back. You can skip to the start of the chapter.

🕐 Playback Elapsed Time (Direct Time Skip)
- Shows the elapsed time from the beginning of the disc to the present.
  This lets you skip based on time.
- Press ◀/▶ to move to the field of Hour, Minute, Second, then press ▲/▼ to set the time. Press **SET/ENTER** to start playback from that set time.

💬 Subtitle Language
- Shows the currently selected subtitle language. If subtitles are provided in other languages, you can switch to your preferred language.

📹 Angle Number
- Shows the currently selected angle number. If the video is recorded with multiple angles, you can switch the angle.

◀)) Audio
- Shows the currently selected type of audio. You can select the desired type of audio.

𝕟s Digital Super Picture
- Emphasizes and enhances definition of details and contours in the video. This reduces noise and makes video easier to see.
- Press ▲/▼ to select "ON" or "OFF", then press ◀/▶ to set the level. Then press **SET/ENTER**.
- There is one setting level on the "soft" side and 3 setting levels on the "sharp" side.
- If you want to enjoy a more defined picture (with detailed pictures), press ▶ while "ON" is displayed for Digital Super Picture. For old movies or videos with a lot of noise, you can reduce noise for an easier to see picture by pressing ◀ while "ON" is displayed for Digital Super Picture.

🄶 Digital Gamma
- If a video is dark and hard to see, you can brighten the dark parts for easier viewing by setting Digital Gamma. Set this when watching discs with many dark scenes (i.e. movie and concert discs), and when viewing a disc in a bright room. This lets you see dark parts better and enjoy video with a greater sense of depth.
- Press ▲/▼ to select "ON" or "OFF", then press ◀/▶ to set the level. Then press **SET/ENTER**.
- Digital Gamma can be set to three different levels.

⸜⸝⸞ Dolby Virtual Surround
- Lets you enjoy surround audio via analogue connection with a stereo type (2ch) TV or audio equipment.
- Even if you use a digital connection, Dolby Virtual Surround will work in the following cases.
  - When playing back linear PCM audio from a DVD.
  - When playing back Dolby Digital audio while DIGITAL AUDIO OUTPUT (page **88**) is set to "PCM".
- This Recorder uses a Spatializer System* for Dolby Digital Surround.
  * Certain audio features of this product manufactured under a license from Desper Products, Inc. *Spatializer*® N-2-2™ and the circle-in-square device are trademarks owned by Desper Products, Inc.
- If audio recorded monaurally is played back with Dolby Virtual Surround ON, the audio level may decrease, making it hard to hear. If this happens, turn Dolby Virtual Surround OFF.
- Dolby Virtual Surround will not work in the following cases:
  - While watching a TV broadcast or external input.
  - Multi-karaoke audio from a karaoke disc, 96 kHz 24-bit linear PCM audio, or DTS audio.
- If you set Dolby Virtual Surround to "ON" and audio sounds funny during playback, set it to "OFF".
- There are no level settings.

📄 **NOTE**
- These functions cannot be used with all discs.

Simultaneous Recording/Playback Function
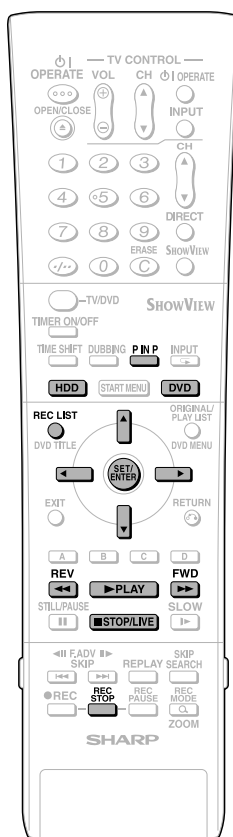
HDD DVD-RW DVD-RW DVD-R DVD VIDEO
VR MODE VIDEO MODE

VIDEO CD AUDIO CD

Plays back from HDD, DVD or CD while recording a programme onto HDD.

Viewing the Programme Being Recorded from the Beginning while Recording to HDD (Chasing Playback)

1 Press ▶PLAY during recording.
- The programme being recorded will play back from the beginning.

2 Press ◀◀ REV or ▶▶ FWD during Chasing Playback.
- Each time you press the buttons, the Fast Reverse/Forward Playback speed changes as shown below.

▶1 → ▶2 → ▶3
(Approx. 2×) (Approx. 8×) (Approx. 32×)

Example: When ▶▶ FWD is pressed once

Fast Forward Playback 2× icon

▶1

- Press ▶ PLAY to return to the normal playback speed.

3 Press ■STOP/LIVE to return to the live broadcast which is being recorded.
- Press REC STOP to watch normal playback.
- For details on Chasing Playback, see pages **31**, **32**.

DVD/CD Playback during HDD Recording (Simultaneous Recording/Playback)

1 Press DVD during HDD recording.
- The DVD button on the front of the Recorder lights up.

2 Load a DVD or CD, then press ▶PLAY.
- You can watch/listen to a DVD/CD while continuing recording to HDD.

Playing Back a Title on the HDD during DVD Recording (Simultaneous Recording/Playback)

1 Press HDD during DVD recording.
- The HDD button on the front of the Recorder lights up.

2 Play back the title in the HDD.

Viewing Another Programme Recorded on HDD while Recording to HDD (Simultaneous Recording/Playback)

1 Press REC LIST during recording.
- The REC LIST (list of recorded programmes) is displayed.

2 Press ▲/▼/◀/▶ to select programme you want to watch, then press SET/ENTER.
- For details on programme list operation, see page **51**.

▷ NOTE
- Recording to HDD continues even while playing back another programme on the HDD or a DVD/CD.
- ■STOP/LIVE is the button for stopping playback. Recording will not stop. To stop recording, press REC STOP.
- You cannot play back a DVD-RW/R while recording to that same DVD-RW/R.
- You cannot start recording during playback from HDD, DVD or CD.
- During Simultaneous Record/Playback, the recording conditions may have an effect on playback, but recording will still be done correctly.

Checking the Programme Being Recorded during Playback Using the Simultaneous Recording/Playback Function (Picture in Picture)
- Press P IN P on the remote control. A small picture is displayed on the playback screen, so you can check the programme being recorded (or the programme which is stopped).
- Picture in Picture will not work during audio CD playback.

Function Menu
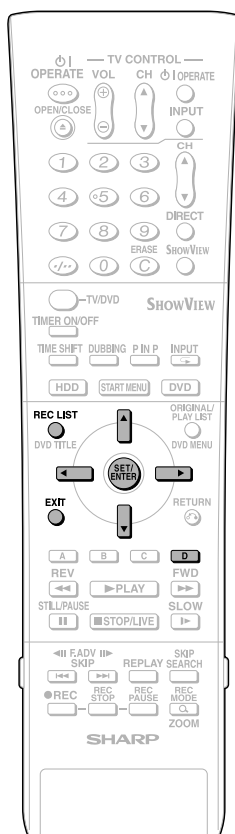
How to Use the FUNCTION MENU

HDD

Allows you to call up "HI SP DUB PRIORITY" from REC LIST and cancel High Speed Dubbing Priority setting.

- The FUNCTION MENU can be called up during HDD playback.

1 Press REC LIST or select REC LIST in "START MENU" screen.
- The "REC LIST" screen is displayed.

2 Press ▲ / ▼ / ◄ / ► to select the title you wish to cancel High Speed Dubbing Priority setting for.

3 Press YELLOW (D).
- The FUNCTION MENU is displayed with the cursor at "HI SP DUB PRIORITY".

4 Press SET/ENTER.

5 Press ◄ / ► to select "YES", then press SET/ENTER.
- Select "NO" if you do not wish to cancel High Speed Dubbing Priority setting.

```
■ REC LIST                                    25/12  9:54
        TITLE: PR33 FINE
     TITLE INFO: 4/10 MON 16:00  ~  16:10
HI SP DUB PRIORITY


              CANCEL PRIORITY HIGH SPEED DUBBING
              FOR THIS TITLE? CANNOT SET AGAIN
              AFTER CANCELED.
                   YES            NO

        ◄ ►SELECT   ENTER ENTER    RETURN
```
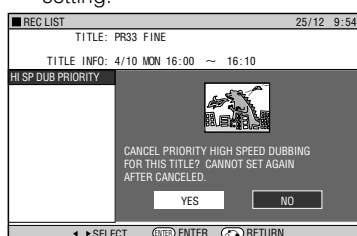
6 Press EXIT to quit FUNCTION MENU.

📄 NOTE ─────────────────────────
- This feature cancels High Speed Dubbing Priority setting for the title recorded with "HI SP DUB PRIORITY" set to "YES". When this is cancelled, limitations during editing are relaxed, but the original state cannot be restored.

Editing (HDD/DVD)

About Editing

Content that can be edited and editing operations vary according to the recording mode.

Recordings on HDD, or on DVD-RW in VR mode

You can do various types of editing with this Recorder alone. For example it is possible to create a compilation of your favorite videos by gathering your favorite scenes from recorded titles, moving scenes within a specified range, or erasing unnecessary scenes. You can edit original videos you have recorded into a Play List without changing the content of the original videos.

NOTE
- If disc protection is set for a DVD-RW, it cannot be edited.

ORIGINAL
- A recorded video (title) in as is form is called an ORIGINAL. A single recording (from record start to stop) forms a single title.

PLAY LIST
- A title created by editing based on originals is called a PLAY LIST. A play list can be remade any number of times.

Original   Original   Original
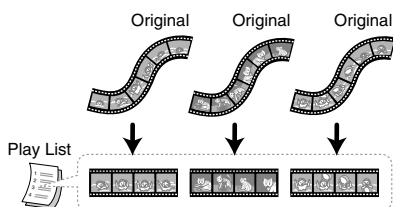
Play List

NOTE
- A Play List is a list which describes the playback sequence of originals, and it does not actually copy the originals. This makes it possible to perform editing while using only a little disc space.

Recordings on DVD-RW/R in Video mode

The following content can be edited.
- Input (change) title name (page **69**)
- Erase title (page **73**)

NOTE
- ERASE TITLE for a recording in Video mode will change settings so that the "erased" title cannot be seen in the REC LIST, but this does not mean that the video is actually erased. (Free time on the disc will not increase. With a DVD-RW recorded in Video mode, free time on the disc will increase when the title recorded last is erased.)
- Editing is not possible if the disc has been finalized (page **95**). With a DVD-RW, editing is possible again if finalization is cancelled.
- Additional recording and editing can be done using only this Recorder until the disc is finalized.

Editing Procedure

Basic procedure for editing an original title recorded in VR mode

Load a disc.

Select the title to be edited, and edit.

- Erasing Unnecessary Scenes from an Original Title (ERASE SCENE) (page **67**).
- Inputting/Changing Title Name (CHANGE TITLE NAME) (page **69**).
- Changing Thumbnail (CHANGE THUMBNAIL) (page **70**).
- Making Sections in a Title (DIVIDE CHAPTER) (page **71**).
- Combining Chapters Together (COMBINE CHAPTERS) (page **72**).
- Disabling Title Edit and Erase (TITLE PROTECT) (page **72**).
- Erasing All Titles (page **73**).
- Erasing by Selecting a Title (or Chapter) (page **73**).

Basic procedure for editing titles recorded in VR mode after making a Play List

Load a disc.

Create a Play List.

- Creating from Original Titles (page **74**).
- Creating from Part of an Original (page **74**).

Select and edit the created Play List.

- Erasing All Titles (page **73**).
- Erasing by Selecting a Title (or Chapter) (page **73**).
- Adding a Scene from an Original to a Play List (ADD SCENE) (page **75**).
- Changing the Title Sequence (MOVE TITLE) (page **77**).
- Erasing Unnecessary Scenes (ERASE SCENE) (page **78**).
- Inputting/Changing Title Name (CHANGE TITLE NAME) (page **78**).
- Changing Thumbnail (CHANGE THUMBNAIL) (page **78**).
- Making Sections in a Title (DIVIDE CHAPTER) (page **78**).
- Combining Chapters Together (COMBINE CHAPTERS) (page **78**).

NOTE

Editing cannot be done in the following cases.
- Play Lists cannot be created for discs recorded in Video mode.
- Play Lists cannot be created for recordings on DVD-R.
- Finalized DVD-RWs (Video mode) cannot be edited. (Editing can be enabled by cancelling finalization.)
- A Play List cannot be created from original titles/chapters containing a "Copy Once" enabled programme which is recorded on HDD.

Editing (HDD/DVD)
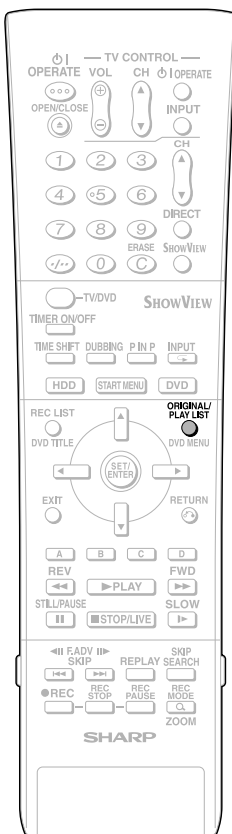
Edit Screen

Title being edited

```
■EDIT(HDD ORIGINAL)                        25/12 10:28
     TITLE: PR33 FINE
   TITLE INFO: 4/10 MON 20:00  ~  20:14
 ERASE SCENE                         T    2
 CHANGE TITLE NAME                   C    01
 CHANGE THUMBNAIL                    ⏱ 00:00:02
 DIVIDE CHAPTER                      F    00
                       SPECIFY ERASE
                       RANGE

 (PLAY) PLAYBACK        (ENTER) SET START POINT
```
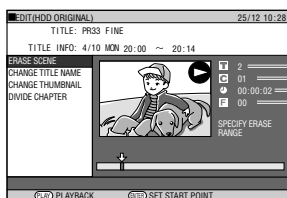
Chapter being edited

Time being edited

Frame being edited

- There is no frame display for titles recorded (dubbed) with high speed dubbing priority, or for titles recorded (dubbed) in Video mode.

Seamless Playback

This enables smooth playback at the transitions between edited video scenes. (However, a shift of about one second may arise at the transitions, and part of the scene may not appear.) (Page **89**)

- Set this function by selecting: "START MENU"→"OTHER SETTINGS 1" → "AD-JUSTMENT" → "OPTION SETTING" → "SEAMLESS PLAYBACK".

High Speed Dubbing Priority

If a title is recorded onto HDD using high speed dubbing priority, editing cannot be done at the frame level. To perform editing at the frame level, set "HI SP DUB PRIORITY" to "NO" (pages **45**, **89**).

- Set this function by displaying "REC LIST" and then selecting in order of: "FUNCTION MENU" → "HI SP DUB PRIORITY".
- If you have recorded a title with HI SP DUB PRIORITY set to "YES", and you want to edit that title in frame units, cancel HI SP DUB PRIORITY (page **64**).
  You cannot set "HI SP DUB PRIORITY" to the title again once you cancel.

⊟ NOTE
- When you perform editing like adding a chapter mark or erasing a scene, a slight discrepancy may arise between the "EDIT" screen and actually edited video.
- If you play back a disc edited at the frame level with another DVD recorder, there may be a shift in the start or end point, or the screen may show a different thumbnail.

Switching between Original and Play List
(Play Lists can be created only for HDD or VR mode)

Switching when the Recorder power is on
ORIGINAL/PLAY LIST
Press **ORIGINAL/PLAY LIST** in the stopped state. Each time this button is pressed, the setting will toggle between ORIGINAL and PLAY LIST.

```
■ HDD                       ■ DVD-RW
    ORIGINAL                    VR ORIGINAL
 FINE  REMAIN 230H9M        FINE  REMAIN 100M
 T   1 0                    T   1 / 1
 C   1 0                    C   1 / 1
 ⏱ 0 0 : 0 0 : 0 0         ⏱ 0 0 : 0 0 : 0 0
```
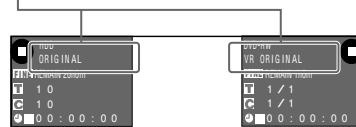
⊟ NOTE
- If recording is done while switched to play list, the system will automatically switch back to original.

Switching at the REC LIST
ORIGINAL/PLAY LIST
Press **ORIGINAL/PLAY LIST** at the REC LIST. Each time this button is pressed, the setting will toggle between ORIGINAL and PLAY LIST.

```
■REC LIST (DVD ORIGINAL)                   25/12 10:28
     TITLE: PR33 FINE
   TITLE INFO: 4/10 MON 16:00  ~  16:10

  1           2           3

  4           5           6
```
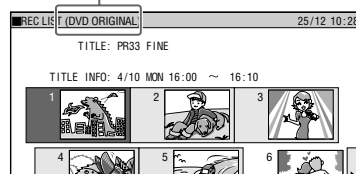
Switching at Edit screen
ORIGINAL/PLAY LIST
Press **ORIGINAL/PLAY LIST** at the "EDIT" screen. Each time this button is pressed, the setting will toggle between ORIGINAL and PLAY LIST.

```
■EDIT (DVD ORIGINAL)                       25/12 10:28
     TITLE: PR33 FINE
   TITLE INFO: 4/10 MON 16:00  ~  16:10

  1           2           3

  4           5           6
```
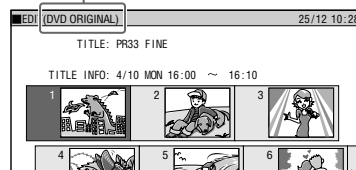
⊟ NOTE
- If a Play List has not been created, the "SELECT EDIT OR CREATE PLAYLIST" screen appears.

Editing an Original Title (HDD/DVD)
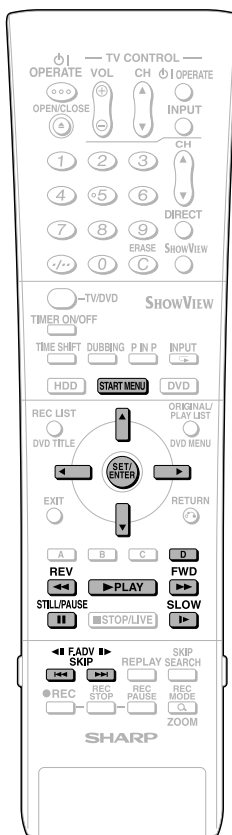
Erasing Unnecessary Scenes from an Original Title (ERASE SCENE)

`HDD` `DVD-RW`
VR MODE

Selects a scene from an original video and erase it.
• To erase all titles, see page **73**.
• To erase by title (or chapter), see page **73**.

□ NOTE
• Scenes cannot be erased on DVD-RW/R (Video mode) discs.

Before Starting Editing
• Switch to the drive (HDD or DVD) to be edited.

1 **Press START MENU to display "START MENU" screen.**

2 **Press ▲/▼/◄/► to select "EDIT/ERASE", then press SET/ENTER.**
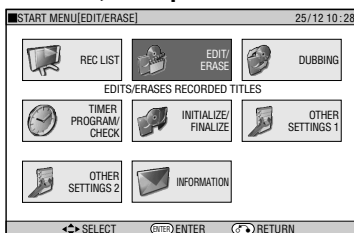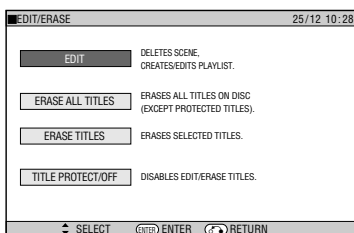
3 **Press ▲/▼ to select "EDIT", then press SET/ENTER.**

• The Original Edit Title List screen appears.

4 **Press ▲/▼/◄/► to select the title to edit, then press Yellow (D) (EDIT MENU).**

• Edit Menu Screen appears.

5 **Press ▲/▼ to select "ERASE SCENE", then press SET/ENTER.**
• The selected title is paused.
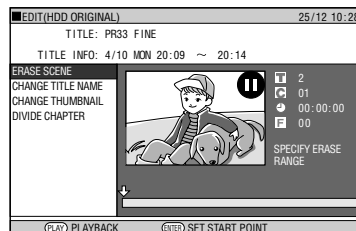
6 **Press ►PLAY to start playback.**
• Find the scene to be erased using ►►FWD, ◄◄REV, ❚❚STILL/PAUSE, ◄◄◄ , ►►► , or ❘►SLOW.

7 **Press SET/ENTER when you reach the scene to be erased.**
• The erase start point is set. (Title playback continues.)
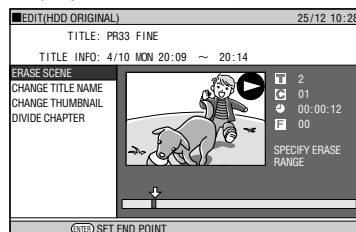
• When the start point is set to near the beginning of a chapter, the beginning of the chapter will be selected as the start point. To make the original designated start point effective, set it again after combining up with the chapter just before. (page **72**)

8 **Press SET/ENTER when you reach the end of scene to be erased.**
• The erase end point is set. (The title will pause.)

• When the end point is set to near the end of a chapter, the end of the chapter will be selected as the end point. To make the original designated end point effective, set it again after combining up with the chapter just after. (page **72**)

Continued on Next Page ►►►

67 ⒼⒷ

Editing an Original Title (HDD/DVD)
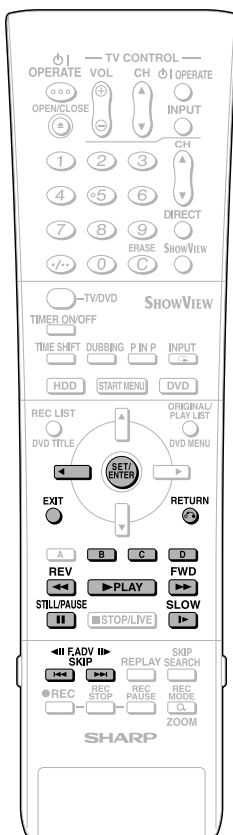
9 **Press Red (B) (CONFIRMING) to confirm the contents.**
- The title is played back without the scene to be erased.

Press Yellow (D) (ERASE) to erase.
- Go to step **10**.
- Press **RETURN** to cancel scene erase.

10 **Press ◀ to select "YES", then press SET/ENTER.**

■EDIT(HDD ORIGINAL)		25/12 10:28
TITLE: PR33 FINE		
TITLE INFO: 4/10 MON 20:09 ～ 20:14		
ERASE SCENE		
CHANGE TITLE NAME		
CHANGE THUMBNAIL	ERASE THIS SCENE?	
DIVIDE CHAPTER		
	YES	NO
◀ ▶SELECT	(ENTER)ENTER	(⤺)RETURN
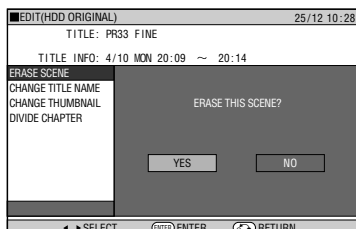
- Erase begins.
  When erase completes, the screen in step **5** appears.
- If "C (UNDO)" is displayed, you can undo edit by pressing **Green (C)**.
- To quit scene erase, press **RETURN**. Then the edit screen appears.

11 **Press EXIT to exit from Edit mode.**

📄 **NOTE**

Selecting start and end points for scene erase
- You cannot set a range shorter than 3 seconds.
- Once you erase a section of an original, it is completely erased. It cannot be restored, so be very careful and confirm before erasing.
- Scenes can only be added and erased a maximum of 50 times per title.
- If scenes have been added 51 or more times to a disc using another DVD recorder. Editing (Recording) may not function.

Searching for the Start Point and End Point Scenes

The following playback operations are available when searching for the start point and end point scenes.

Playback
- If you press ▶PLAY, the currently paused title will be played back.

Skipping to the start of a chapter
- If the scene to be selected is in another title or chapter, first search for the title or chapter using I◀◀ or ▶▶I .

Searching for scenes in a chapter
- ◀◀REV and ▶▶FWD are convenient for searching for a scene in a chapter.

Pause
- When you reach a scene near the start point or end point, press ❙❙STILL/PAUSE to pause. This will make it easier to find the scene. The start and end points may shift slightly.

Frame Advance/Reverse
- If you press ▶▶I after pause, the video will start Frame Advance Playback. If you press I◀◀ , it will start Frame Reverse Playback.

Final selection of scene
- To select a scene more accurately, use slow playback starting a little before the scene to be selected. This will keep you from going beyond the scene.
  If you press I▶SLOW after pausing, you can select a scene at your leisure during slow playback of the video.
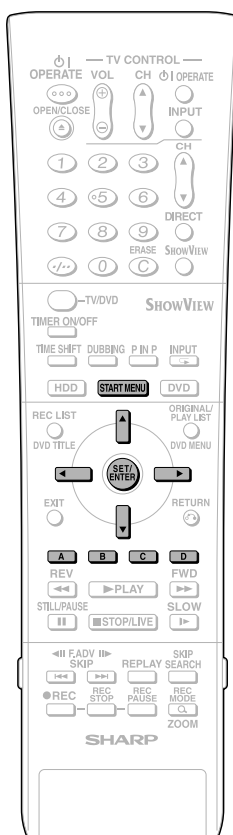
Inputting/Changing Title Name (CHANGE TITLE NAME)

`HDD` `DVD-RW` VR MODE `DVD-RW` VIDEO MODE `DVD-R`

- When you record, a title name including the date, time and channel number is automatically created.
  You can freely change this title name.
- You can input up to a maximum of 64 characters.
  To input, perform the following steps in order: "Select characters to be changed" → "Delete unnecessary characters (characters to be changed)" → "Input new characters".

NOTE
- Title names cannot be changed in finalized Video mode discs.

Before Starting Editing
- Switch to the drive (HDD or DVD) to be edited.

1 Press START MENU.
2 Press ▲/▼/◀/▶ to select "EDIT/ERASE", then press SET/ENTER.

```
■START MENU[EDIT/ERASE]              25/12 10:28
  REC LIST      EDIT/      DUBBING
                ERASE
         EDITS/ERASES RECORDED TITLES
  TIMER         INITIALIZE/   OTHER
  PROGRAM/      FINALIZE      SETTINGS 1
  CHECK
```

3 Press ▲/▼ to select "EDIT", then press SET/ENTER.

```
■EDIT/ERASE                          25/12 10:28
  EDIT              DELETES SCENE,
                    CREATES/EDITS PLAYLIST.
  ERASE ALL TITLES  ERASES ALL TITLES ON DISC
                    (EXCEPT PROTECTED TITLES).
```

4 ① Press ▲/▼/◀/▶ to select the title to edit.
② Press Yellow (D) (EDIT MENU).
- Edit Menu screen appears.

```
■EDIT(HDD ORIGINAL)                  25/12 10:28
  TITLE: PR33 FINE
  TITLE INFO: 4/10 MON 16:00 ~ 16:10
   1          2           3
   4          5           6
  ◆►SELECT  ENTER ENTER  ⟳RETURN
  ▲▼ TITLE LIST  B CHAPTER     D EDIT MENU
```
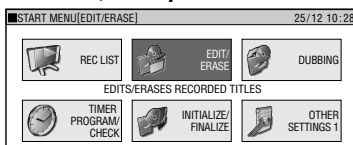
5 ① Press ▲/▼ to select "CHANGE TITLE NAME".

```
■EDIT(HDD ORIGINAL)                  25/12 10:28
  TITLE: PR33 FINE
  TITLE INFO: 4/10 MON 16:00 ~ 16:10
  ERASE SCENE
  CHANGE TITLE NAME
  CHANGE THUMBNAIL    CHANGE TITLE NAME.
  DIVIDE CHAPTER
```

② Press SET/ENTER.
- Title Name Change screen appears.

6 Change Title Name.

Input field (Displays title name. Can input and change title name.)

Cursor (Displays the position to input characters.)

Displays input characters.

Select when you switch between capital letters and small letters.

```
■EDIT(HDD ORIGINAL)                  25/12 10:28
  TITLE: PR33 FINE
  TITLE INFO: 4/10 MON 16:00 ~ 16:10
  PR33 FINE 2004/4/10 16:00
  A B C D E F G H I J K L M . . ? !
  N O P Q R S T U V W X Y Z ( ) : ;     small
  Á Â Á Â Â Æ Ç É É É É Í Í Í Í #
  Đ Ñ Ó Ó Ó Ó Ø Ú Ú Ú Ü Ý Þ ß S %
  0 1 2 3 4 5 6 7 8 9 - + < = > * _     END
  & ' " / [ \ ] ^ + × ± { | } ~ ¨
  ◆►SELECT  ENTER ENTER  ERASE ERASE ALL  ⟳RETURN
  ▲▼ BACK SPACE  B BACK  C FORWARD  D SPACE
```

Press ▲/▼/◀/▶ to select the character to be input.

Select when you complete inputting character.

① Press Red (B) or Green (C) to select the character to change.
- When you want to insert characters, move the cursor to the position you want to insert by pressing Red (B) or Green (C).

② Press Blue (A) to erase the character to change.

```
World Rail■
```

7 Press ▲/▼/◀/▶ to select the character to input, then press SET/ENTER.
- Inputs character in input field.
- To switch between capital and small letters, select "CAPS" or "small", then press SET/ENTER.

8 Input title letters by repeating step 7.
- Press Blue (A) (BACK SPACE) to erase text to the left of the cursor, a character at a time.
- Press Red (B) (BACK) to move the cursor back one space.
- Press Green (C) (FORWARD) to move the cursor forward one space.
- Press Yellow (D) (SPACE) to input a space.
- The maximum number of characters you can input is 64.

9 Press ▲/▼/◀/▶ to select "END" and then press SET/ENTER After input is finished.
- The new title is set, and the screen in step 5 displays.

Press Green (C) (UNDO) to return to the previously set title.
- The title returns to original name.
- Operate according to the instructions of the screen.

10 Press EXIT to quit editing.
- Edit mode will terminate.
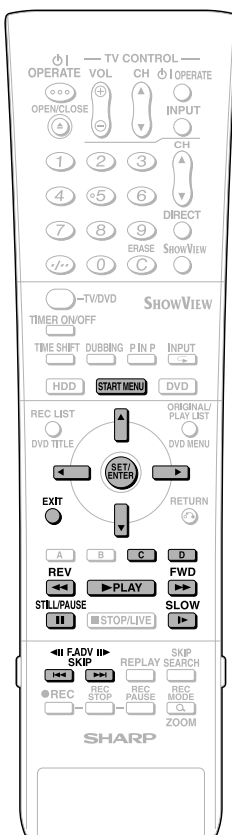
Changing Thumbnail (CHANGE THUMBNAIL)

HDD **DVD-RW**
VR MODE

Changes the still frame picture displayed at the Thumbnail screen of the REC LIST to your favorite scene within the title.

Before Starting Editing
• Switch to the drive (HDD or DVD) to be edited.

1 Press **START MENU**.

2 Press ▲/▼/◀/▶ to select "EDIT/ ERASE", then press **SET/ ENTER**.
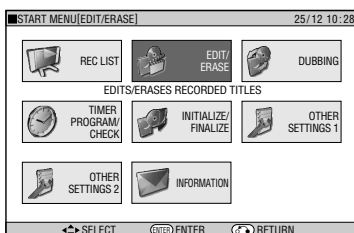
**3** Press ▲/▼ to select "EDIT", then press **SET/ENTER**.
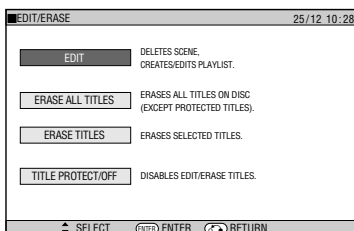
• The Original Edit Title List Screen appears.

4 Press ▲/▼/◀/▶ to select the title to edit, then press **Yellow (D) (EDIT MENU)**.

• Edit Menu screen appears.

5 ① Press ▲/▼ to select "CHANGE THUMBNAIL".
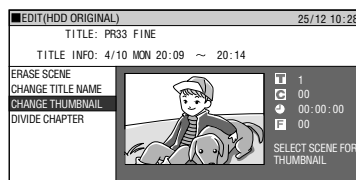
② Press **SET/ENTER**.

6 Press ▶PLAY to start playback.
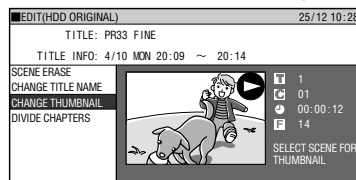
• Find the scene you want to use as a thumbnail using ▶▶FWD, ◀◀REV, ❙❙STILL/PAUSE, ❙◀◀ , ▶▶❙ , or ❙▶SLOW.

7 Press **SET/ENTER** when you reach the scene you want to use as a thumbnail.
• Playback is paused.

8 ① If this is the screen you want, select "YES" by pressing ◀/▶.
• If you select "NO", you can return to step **5** and select the scene again.
② Press **SET/ENTER**.
• The new Thumbnail screen is set, and the system returns to the screen in step **5**.

Press Green (C) (UNDO) to return to the previously set thumbnail.
• Operate according to the instructions of the screen.

9 Press **EXIT** to quit Thumbnail edit.
• Edit mode will terminate.
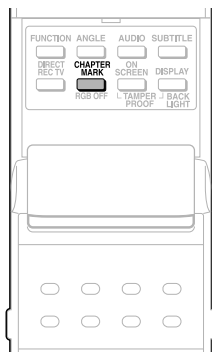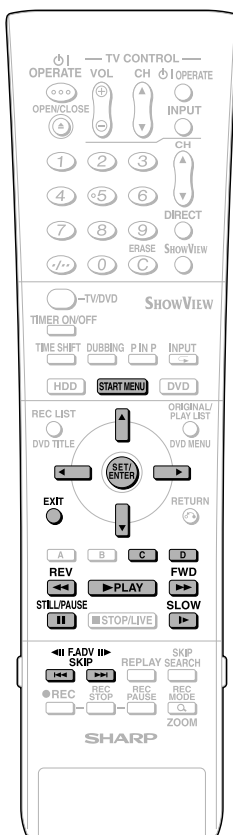
Making Sections in a Title (DIVIDE CHAPTER)

`HDD` `DVD-RW`
VR MODE

Divides a title into multiple chapters and make editing and dubbing of chapter as unit easier.

• You can set chapter divisions by pressing **CHAPTER MARK** (under the cover) during recording or playback.

Before Starting Editing
• Switch to the drive (HDD or DVD) to be edited.

1 Press **START MENU**.

2 Press ▲/▼/◀/▶ to select "EDIT/ERASE", then press **SET/ENTER**.

```
■START MENU[EDIT/ERASE]                25/12 10:28

   [REC LIST]        [EDIT/ERASE]       [DUBBING]

          EDITS/ERASES RECORDED TITLES

   [TIMER           [INITIALIZE/      [OTHER
   PROGRAM/         FINALIZE]         SETTINGS 1]
   CHECK]

   [OTHER           [INFORMATION]
   SETTINGS 2]
```

3 Press ▲/▼ to select "EDIT", then press **SET/ENTER**.

```
■EDIT/ERASE                            25/12 10:28

   EDIT              DELETES SCENE,
                     CREATES/EDITS PLAYLIST.

   ERASE ALL TITLES  ERASES ALL TITLES ON DISC
                     (EXCEPT PROTECTED TITLES).

   ERASE TITLES      ERASES SELECTED TITLES.

   TITLE PROTECT/OFF DISABLES EDIT/ERASE TITLES.
```

4 Press ▲/▼/◀/▶ to select the title to edit, then press **Yellow (D) (EDIT MENU)**.

```
■EDIT(HDD ORIGINAL)                    25/12 10:28
        TITLE: PR33 FINE
   TITLE INFO: 4/10 MON 20:09 ～ 20:14

   [1]        [2]        [3]

   [4]        [5]        [6]
```
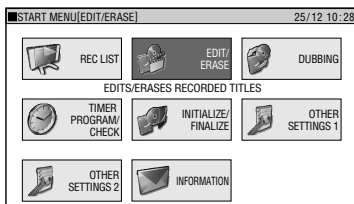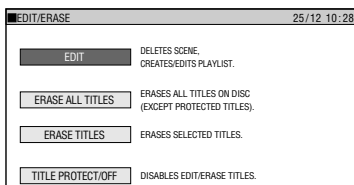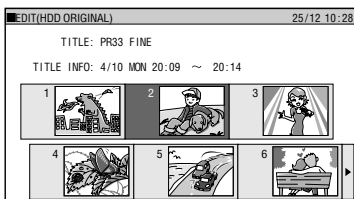
5 Press ▲/▼ to select "DIVIDE CHAPTER", then press **SET/ENTER**.

```
■EDIT(HDD ORIGINAL)                    25/12 10:28
        TITLE: PR33 FINE
   TITLE INFO: 4/10 MON 20:09 ～ 20:14
ERASE SCENE
CHANGE TITLE NAME                      T 2
CHANGE THUMBNAIL                       C 01
DIVIDE CHAPTER                         ⏱ 00:00:00
                                       F 04
                          SELECT POSITION
                          TO DIVIDE
                          THIS CHAPTER
```

6 Press ▶PLAY to start playback.

```
■EDIT(HDD ORIGINAL)                    25/12 10:28
        TITLE: PR33 FINE
   TITLE INFO: 4/10 MON 20:09 ～ 20:14
ERASE SCENE
CHANGE TITLE NAME                      T 2
CHANGE THUMBNAIL                       C 01
DIVIDE CHAPTER                         ⏱ 00:00:01
                                       F 04
                          SELECT POSITION
                          TO DIVIDE
                          THIS CHAPTER
```
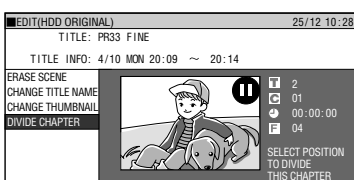
• Find the scene to erase using ▶▶FWD, ◀◀REV, ❚❚STILL/PAUSE, ❙◀◀ , ▶▶❙ , or ❙▶SLOW on the remote comtrol.

7 Press **SET/ENTER** at the point where you want to divide.

```
■EDIT(HDD ORIGINAL)                    25/12 10:28
        TITLE: PR33 FINE
   TITLE INFO: 4/10 MON 20:09 ～ 20:14
ERASE SCENE
CHANGE TITLE NAME                      T 1
CHANGE THUMBNAIL                       C 01
DIVIDE CHAPTER                         ⏱ 00:00:12
                                       F 04
                          DIVIDE CHAPTER?

        YES              NO
```
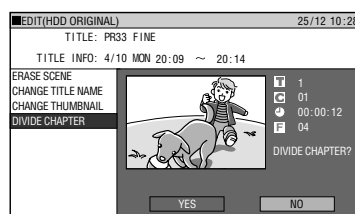
8 Press ◀/▶ to select "YES", then press **SET/ENTER**.
• To continue dividing, repeat steps **5** to **7**.
To cancel a chapter division, press Green (C) (UNDO).
• Operate according to the instructions on the screen.

9 Press **EXIT** to quit editing.
• Edit mode will terminate.

📄 NOTE
• Divide a chapter to make it 3 or more seconds. You cannot divide a chapter into a section which is less than 3 seconds.

Editing an Original Title (HDD/DVD)
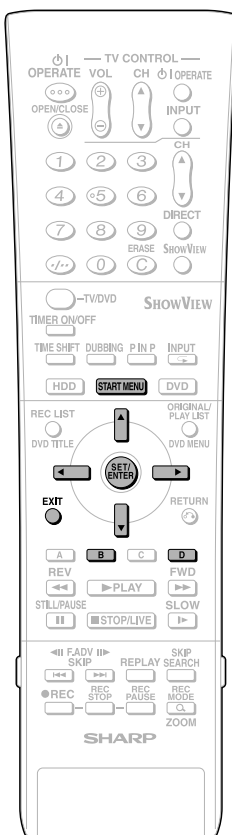
Combining Chapters Together (COMBINE CHAPTERS)

`HDD` `DVD-RW` VR MODE

Combines two adjacent chapters into a single chapter.

📄 **NOTE**
• You cannot combine chapters automatically recorded when a scene was erased.
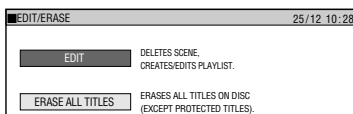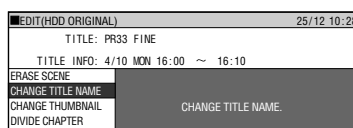
Before Starting Editing
• Switch to the drive (HDD or DVD) to be edited.

1 Select "EDIT/ERASE" in "START MENU" screen, then press **SET/ENTER**.

2 Press ▲/▼ to select "EDIT", then press **SET/ENTER**.

3 Press ▲/▼/◀/▶ to select the title you wish to edit.

4 Press **Red (B)** (CHAPTER) to select Chapter Thumbnail screen.

5 Press ▲/▼/◀/▶ to select the chapter to combine, then press **Yellow (D)** (EDIT MENU).
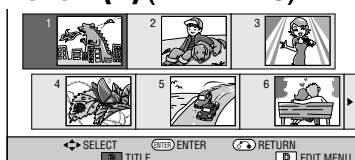
6 Press **SET/ENTER**.

7 Press ▲/▼ to select combine procedure you prefer, then press **SET/ENTER**.
• Select from: "COMBINE W/PREV", "COMBINE W/NEXT" or "DON'T COMBINE".
• If you select "COMBINE W/PREV" or "COMBINE W/NEXT", the two chapters will join, and Chapter Thumbnail screen is displayed.
• If you select "DON'T COMBINE", the previous screen displays.
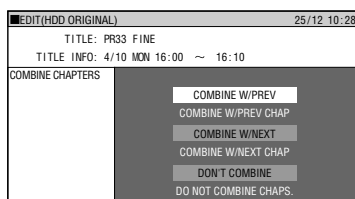
8 Press **EXIT** to exit from Edit mode.

Disabling Title Edit and Erase (TITLE PROTECT)

`HDD` `DVD-RW` VR MODE

Disables edit and erase so you cannot mistakenly change or erase the content of a title.
Lets you safely save a disc for which editing is in progress.
• This operation will not work with Video mode discs.
• Titles created with Play List (page **74**) cannot be protected.

Before Starting Editing
• Switch to the drive (HDD or DVD) to be edited.

1 Select "EDIT/ERASE" in "START MENU" screen, then press **SET/ENTER**.

2 Press ▲/▼ to select "TITLE PROTECT/OFF", then press **SET/ENTER**.

3 Press ▲/▼/◀/▶ to select the title to protect, then press **SET/ENTER**.
• Each time the button is pressed, the setting toggles between "PROTECT" and "UNPROTECT".

• The protect mark 🔒 is attached to protected titles.
(The protect mark can be confirmed at either the "REC LIST" screen or "EDIT" screen.)

4 Press **EXIT** to exit from Edit mode.

To Cancel Title Protect

1 Select the title protected in step **3** above, and press **SET/ENTER**.
• Title protect is cancelled, and the protect mark disappears.

📄 **NOTE**
• If "DVD DISC PROTECTION" is set for a DVD-RW (VR mode) disc, protection cannot be cancelled for individual titles. Cancel "DVD DISC PROTECTION" (page **90**).

2 Press **EXIT** to exit from Edit mode.
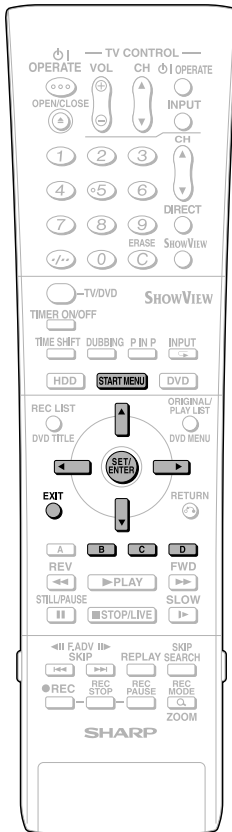
Erasing All Titles

HDD	DVD-RW	DVD-RW	DVD-R
	VR MODE	VIDEO MODE	

This erases the entire contents of a HDD or DVD-RW. (Except titles for which title protect has been set.)

You can erase the following:
- **HDD (ORIGINAL):**
  Erases all titles recorded on the HDD. When originals are erased, play lists are also erased.
- **HDD (PLAY LIST):**
  Erases all play lists created on the HDD. Even if play lists are erased, the original titles are not erased.
- **DVD (ORIGINAL):**
  Erases all titles recorded on DVD. When originals are erased, play lists are also erased.
- **DVD (PLAY LIST):**
  Erases all play lists created on DVD. Even if play lists are erased, the original titles are not erased.

📄 **NOTE**
- When a Video mode disc is finalized, you can no longer erase all titles.

Before Starting Editing
- Switch to the drive (HDD or DVD) to be edited.

1 Select "EDIT/ERASE" in "START MENU" screen, then press **SET/ENTER**.

2 Press ▲/▼ to select "ERASE ALL TITLES", then press **SET/ENTER**.

3 Press ▲/▼ to select what you want to erase, then press **SET/ENTER**.

■ERASE ALL TITLES	25/12 10:28
SELECT AN ITEM BELOW TO ERASE ALL TITLES.	
HDD (ORIGINAL)	
HDD (PLAYLIST)	
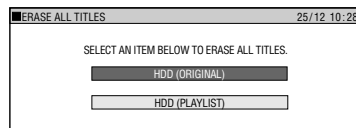
4 Press ◄/► to select "YES", then press **SET/ENTER**.
- Carefully confirm before executing erase.
- If you select "NO" and enter, the screen in step **3** appears.

5 Press **SET/ENTER**.
- All titles (or play lists) are erased, and the screen in step **3** appears. To restore the erased content, press **Green (C)** (CNL ERASE). Operate according to the instructions on the screen. (Note: You can only undo once, to the state immediately before the last erase.)

6 Press **EXIT** to exit from Edit mode.

Erasing by Selecting a Title (or Chapter)

HDD	DVD-RW	DVD-RW	DVD-R
	VR MODE	VIDEO MODE	

Allows you to select titles to erase, and erase them in a batch.

- **When erasing original titles:**
  If original titles are erased, those titles will also be erased from play lists.
- **When erasing play lists:**
  Even if play lists are erased, the original titles will not be erased.

📄 **NOTE**
- Up to a maximum of 20 titles (chapters) can be selected at one time.
- When a Video mode disc is finalized, you can no longer select and erase titles.
- You cannot erase chapters in DVD-RW/R discs (Video mode).

Before Starting Editing
- Switch to the drive (HDD or DVD) to be edited.

1 Select "EDIT/ERASE" in "START MENU" screen, then press **SET/ENTER**.

2 Press ▲/▼ to select "ERASE TITLES", then press **SET/ENTER**.

3 Press ▲/▼/◄/► to select titles to erase.
- If you press **Red (B)** (CHAPTER), the screen will switch to the chapter thumbnail display so you can select and erase chapters.

4 Press **SET/ENTER**.
- If there are other titles (chapters) you wish to erase, select with ▲/▼/◄/► and press **SET/ENTER**.

5 Press **Yellow (D)** (ERASE).

6 Press ◄/► to select "YES".
- Once a title (chapter) has been erased, it cannot be restored. Carefully confirm before executing erase.
- If you select "NO" and enter, operate from step **4** again.

7 Press **SET/ENTER**.
- All selected titles (chapters) are erased.
- To cancel erase, press **Green (C)** (CNL ERASE).
- Operate according to the instructions on the screen.

8 Press **EXIT** to exit from Edit mode.

Editing a Play List (HDD/DVD)
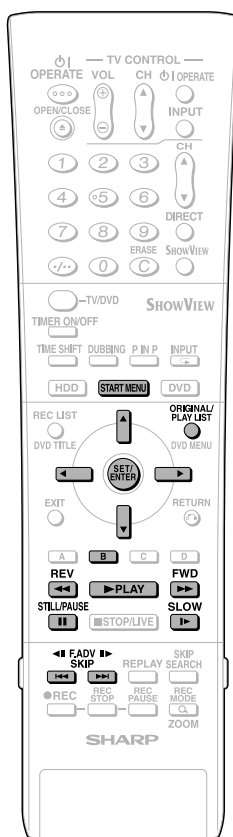
Creating a Play List

`HDD` `DVD-RW`
VR MODE

You can create a Play List by copying a title or chapter units from an original. Also you can select your favorite scenes from originals, and compile them into a Play List.

📄 NOTE
- Operations like "COPY TITLE/CHAPTER" and "COPY SPECIFIED SCENE" do not actually copy the original titles. These operations merely write the information "make this original title a title in the play list". Therefore, you can edit without decreasing free space in the disc or touching the original titles.
- When creating a play list from original titles, the original title's thumbnail and chapter mark information are not copied.
- You cannot create a play list of "Copy Once" titles (programme) recorded on HDD.

Before Starting Editing
- Switch to the drive (HDD or DVD) to be edited.

Creating from Original Titles

Makes a single original title into a play list title.

1 Select "EDIT/ERASE" in "START MENU" screen, then press **SET/ENTER**.

2 Press ▲/▼ to select "EDIT", then press **SET/ENTER**.

3 Press **ORIGINAL/PLAY LIST** to the "PLAY LIST" screen.
- The screen switches to the Play List Edit Screen.
- There still is no title at this point, so a "NEW" title frame with no image is displayed.
- To create a new Play List later, select the "NEW" title frame.

```
■EDIT(HDD PLAYLIST)                    25/12 10:28
SELECT EDIT OR CREATE PLAYLIST


              ┌─────────┐
              │   NEW   │
              └─────────┘
```

4 Press **SET/ENTER**.

```
■EDIT(HDD PLAYLIST)                    25/12 10:28
SPECIFY THE RANGE TO SET PLAYLIST
FROM THE ORIGINAL THEN CREATE PLAYLIST.

          COPY TITLE/CHAPTER
SELECT ORIGINAL TITLE/CHAPTER AND ADD IT.

          COPY SPECIFIED SCENE
SELECT A SCENE FROM ORIGINAL VIDEO
AND ADD IT.
```
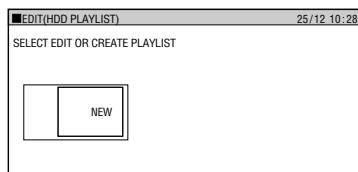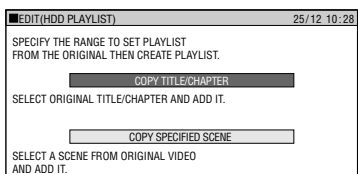
5 ① Press ▲/▼ to select "COPY TITLE/CHAPTER".
   ② Press **SET/ENTER**.
   - "REC LIST" (Thumbnail) screen of the original appears.

6 ① Press ▲/▼/◀/▶ to select title to copy.

```
■EDIT(HDD ORIGINAL)                    25/12 10:28
        TITLE: PR33 FINE
   TITLE INFO: 4/10 MON 20:09  ~  20:14
  ┌──────┐  ┌──────┐  ┌──────┐
  │  1   │  │  2   │  │  3   │
  └──────┘  └──────┘  └──────┘
  ┌──────┐  ┌──────┐  ┌──────┐
  │  4   │  │  5   │  │  6   │ ▶
  └──────┘  └──────┘  └──────┘
```

- To select a chapter, press **Red (B)** (CHAPTER).
   ② Press **SET/ENTER**.
   - The selected title (chapter) becomes a Play List title.

Creating from Part of an Original

You can select a desired scene from an original title, and make it into a Play List title.

1 Perform steps **1-4** of "Creating from Original Titles" in the left column.

2 ① Press ▲/▼ to select "COPY SPECIFIED SCENE".
   ② Press **SET/ENTER**.

3 Press ▲/▼/◀/▶ to select title to copy, then press **SET/ENTER**.
- To select from a chapter, press **Red (B)** (CHAPTER) and select the chapter.

4 Press ▶PLAY to start playback.
- Find the scene to copy using ❙❙STILL/PAUSE, ▶▶FWD, ◀◀REW, ◀◀ , ▶▶ , or ❙▶SLOW.

5 Press **SET/ENTER** at the place where you want to start copying.
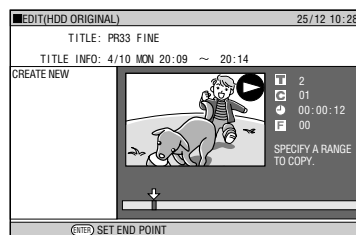
```
■EDIT(HDD ORIGINAL)                    25/12 10:28
        TITLE: PR33 FINE
   TITLE INFO: 4/10 MON 20:09  ~  20:14
CREATE NEW                          T  2
                                    C  01
                                    ⏱ 00:00:12
                                    F  00

                            SPECIFY A RANGE
                            TO COPY.

     ↑
ENTER SET END POINT
```

- If you fast reverse to a scene prior to the start point, the start point will be cancelled.
- When the start point is set to near the beginning of a chapter, the beginning of the chapter will be selected as the start point. To make the original designated start point effective, set it again after combining up with the chapter just before. (page **72**)
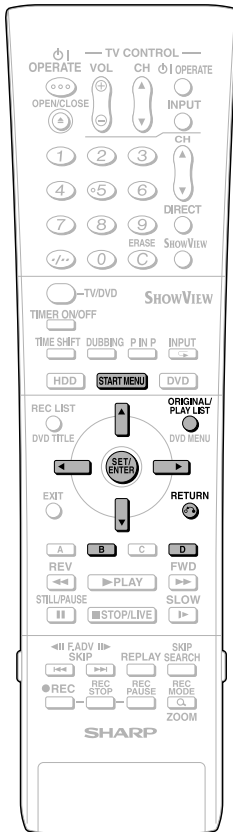
6 Find the place where you want to end copying, then press SET/ENTER.

- If you press **RETURN**, you can reselect the start point.

■EDIT(HDD ORIGINAL)	25/12 10:28

TITLE: PR33 FINE

TITLE INFO: 4/10 MON 20:00 ～ 20:14

CREATE NEW

T 1
C 07
🕐 00:00:32
F 14

CONFIRM CONTENT?

- When the end point is set to near the end of a chapter, the end of the chapter will be selected as the end point. To make the original designated end point effective, set it again after linking up with the chapter just before. (page **72**)

7 Press Red (B) (CONFIRMING) to confirm the content.
Press Yellow (D) (CREATE) to execute copy.
Go to step *8*.

- You can reselect the end point by pressing **RETURN**.

8 ① Press ◀/▶ to select "YES".
② Press SET/ENTER.

SAVE AS A NEW PLAYLIST?

YES   NO

◀ ▶SELECT   (ENTER)ENTER   (⤺)RETURN

- One play list title is created.

📄 **NOTE**

Selecting start or end point to add a scene.
- You cannot set a range shorter than 3 seconds.

Adding a Scene from an Original to a Play List (ADD SCENE)

HDD   DVD-RW
       VR MODE

Adds video selected from an original to the end of play list titles.

📄 **NOTE**
- The selected scene cannot be added if adding it will make the title longer than 12 hours.
- Scenes can be added as long as the length of the title after adding is less than the maximum of 12 hours.

Before Starting Editing
- Switch to the drive (HDD or DVD) to be edited.

1 Select "EDIT/ERASE" in "START MENU" screen, then press SET/ENTER.

2 Press ▲/▼ to select "EDIT", then press SET/ENTER.

3 ① Press ORIGINAL/PLAY LIST to switch to "PLAY LIST" screen.
② Press ▲/▼/◀/▶ to select title to edit.

■EDIT(HDD PLAYLIST)	25/12 10:28

TITLE: PR33 FINE

TITLE INFO: 4/10 MON 20:09 ～ 20:14

NEW   1   2

3   4   5

③ Press Yellow (D) (EDIT MENU).

4 Press ▲/▼ to select "ADD SCENE" then press SET/ENTER.

■EDIT(HDD PLAYLIST)	25/12 10:28

TITLE: PR33 FINE

TITLE INFO: 4/10 MON 20:09 ～ 20:14

ERASE SCENE
CHANGE TITLE NAME   ADD CHAPTER/TITLE
CHANGE THUMBNAIL   SELECT ORIGINAL TITLE/CHAPTER AND ADD IT
DIVIDE CHAPTER
ADD SCENE
MOVE TITLE   SPECIFY SCENE TO ADD
                    SELECT A SCENE FROM ORIGINAL VIDEO AND
                    ADD IT

↕ SELECT   (ENTER) ENTER   (⤺)RETURN

Editing a Play List (HDD/DVD)

5 Adding a Title or Chapter

① **Select "ADD CHAPTER/TITLE", then press SET/ENTER.**
② **Select a title (chapter) at the title (chapter) list, then press SET/ENTER. Go to step 9.**

Specifying and Adding a Scene

• **Select "SPECIFY SCENE TO ADD", then press SET/ENTER. Go to step 6.**

```
■EDIT(HDD PLAYLIST)                    25/12 10:28
        TITLE: PR33 FINE
      TITLE INFO: 4/10 MON 20:09 ~ 20:14
ERASE SCENE
CHANGE TITLE NAME              ADD CHAPTER/TITLE
CHANGE THUMBNAIL
DIVIDE CHAPTER        SELECT ORIGINAL TITLE/CHAPTER AND ADD IT
ADD SCENE
MOVE TITLE                    SPECIFY SCENE TO ADD

                      SELECT A SCENE FROM ORIGINAL VIDEO AND
                      ADD IT

              ◆ SELECT    ENTER ENTER    RETURN RETURN
```
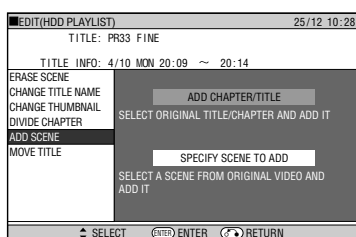
6 Press ▲ / ▼ / ◀ / ▶ to select title (chapter) to edit, then press SET/ENTER.

• The selected title (chapter) pauses.

```
■EDIT(HDD ORIGINAL)                    25/12 10:28
        TITLE: PR33 FINE
      TITLE INFO: 4/10 MON 20:09 ~ 20:14
ERASE SCENE
CHANGE TITLE NAME                           T  2
CHANGE THUMBNAIL                            C  01
DIVIDE CHAPTER                              ⏱ 00:00:00
ADD SCENE                                   F  04
MOVE TITLE
                                           SPECIFY RANGE
                                           TO ADD.

         PLAY PLAYBACK    ENTER SET START POINT
```
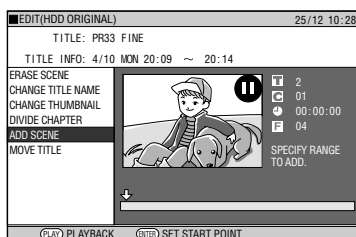
7 ① Press ▶PLAY to start playback.

• Find the scene to add using ❚❚STILL/PAUSE, ▶▶FWD, ◀◀REV, ❙◀◀ , ▶▶❙ , or ❙▶SLOW.

```
■EDIT(HDD ORIGINAL)                    25/12 10:28
        TITLE: PR33 FINE
      TITLE INFO: 4/10 MON 20:00 ~ 20:14
ERASE SCENE
CHANGE TITLE NAME                           T  2
CHANGE THUMBNAIL                            C  01
DIVIDE CHAPTER                              ⏱ 00:00:12
ADD SCENE                                   F  00
MOVE TITLE
                                           SPECIFY RANGE
                                           TO ADD.

         PLAY PLAYBACK    ENTER SET START POINT
```
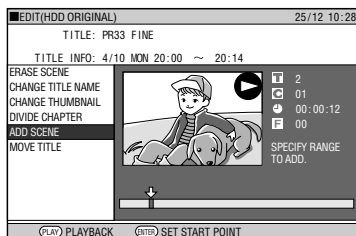
② **Press SET/ENTER at the start point of the scene you want to add.**
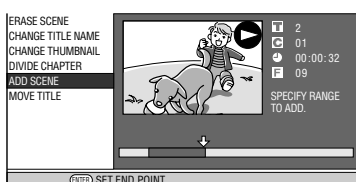
```
ERASE SCENE
CHANGE TITLE NAME                           T  2
CHANGE THUMBNAIL                            C  01
DIVIDE CHAPTER                              ⏱ 00:00:32
ADD SCENE                                   F  09
MOVE TITLE
                                           SPECIFY RANGE
                                           TO ADD.

                ENTER SET END POINT
```

• If you fast reverse to a scene prior to the start point, the start point will be cancelled.

• When the start point is set to near the beginning of a chapter, the beginning of the chapter will be selected as the start point. To make the original designated start point effective, set it again after combining up with the chapter just before. (page **72**)

8 Press SET/ENTER at the end of the scene you want to add.

• Press **RETURN** to reselect the start point of the scene. You can press **RETURN** to reselect the end point even after it is already set.

```
ERASE SCENE
CHANGE TITLE NAME               ❚❚         T  2
CHANGE THUMBNAIL                            C  01
CHANGE THUMBNAIL                            ⏱ 00:00:32
DIVIDE CHAPTER                              F  09
ADD SCENE
MOVE TITLE                                 CONFIRM CONTENT?

           RETURN
           B CONFIRMING          D ADD
```

• When the end point is set to near the end of a chapter, the end of the chapter will be selected as the end point. To make the original designated end point effective, set it again after combining up with the chapter just before. (page **72**)

9 Press Red (B) (CONFIRMING) to confirm the content. Press Yellow (D) (ADD) to add.

• If you press **Red (B)** (CONFIRMING), you can test play the added scene, from the start point to the end point. It may take about one minute for the confirm screen to appear.
• Press **Yellow (D)** (ADD) to add.

10 ① Press ◀ / ▶ to select "YES". ② Press SET/ENTER.

• The scene is added after the selected title, and stored as a new title of the play list.

11 Press EXIT to exit from EDIT mode.

• A chapter mark is automatically set at the start point where the scene is added.

📄 NOTE

• When adding a scene, select a scene which continues for at least 3 seconds. Scenes shorter than 3 seconds cannot be added.
• Scenes can only be added and erased a maximum of 50 times per title.
• If you press ◀◀ **REV** or ❙◀◀ and reverse beyond the start point after setting a start point, the start point will cancel.
• If scenes have been added or erased 51 or more times to a single title in a disc using another DVD recorder, Editing (Recording) may not function.
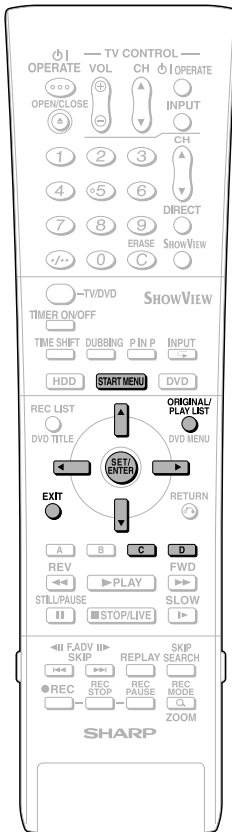
Changing the Title Sequence (MOVE TITLE)

HDD **DVD-RW** VR MODE

Freely changes the sequence of titles.
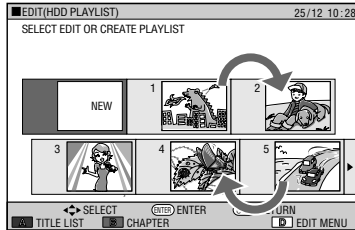
Before Starting Editing
• Switch to the drive (HDD or DVD) to be edited.

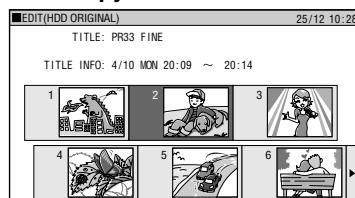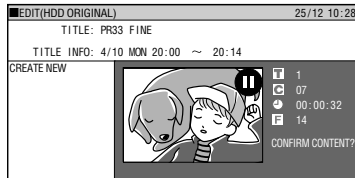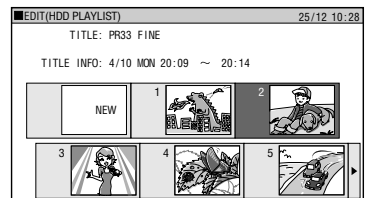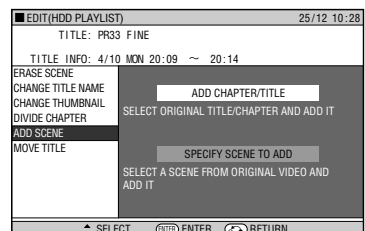**1** Select "EDIT/ERASE" in "START MENU" screen, then press **SET/ENTER**.

2 Press ▲/▼ to select "EDIT", then press **SET/ENTER**.

3 ① Press **ORIGINAL/PLAY LIST** to switch to "PLAY LIST" screen.
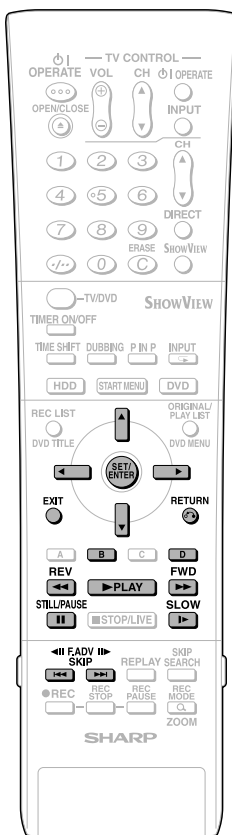② Press ▲/▼/◀/▶ to select title to edit.

③ Press **Yellow (D) (EDIT MENU)**.

4 Press ▲/▼ to select "MOVE TITLE", then press **SET/ENTER**.

5 Press ▲/▼/◀/▶ to select the thumbnail to move the title to.

Selected title | Cursor on the thumbnail to move the selected title to

6 Press **SET/ENTER**.
• If a point prior to the selected title is selected as the destination, the title will move to the point immediately prior to the selected title.
• Press **Green (C)** (UNDO) to restore to the state before the movement. Operate according to the instructions on the screen.

Example: If Title 3 is selected and the destination cursor is set to Title 1, Title 3 is moved to the spot in front of Title 1.

• If a point after the selected title is selected as the destination, the title will move to the point immediately after the selected title.

Example: If Title 3 is selected and the destination cursor is set to Title 4, Title 3 is moved to the spot after Title 4.

7 Press **EXIT** to exit from EDIT mode.

Editing a Play List (HDD/DVD)
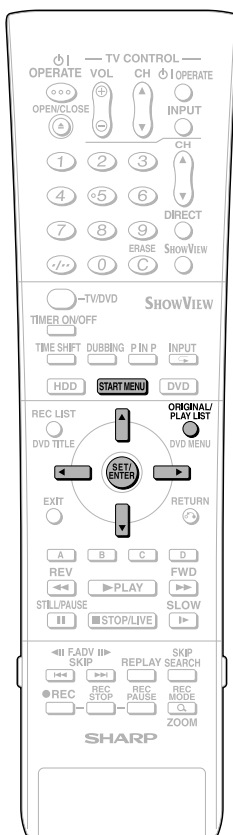
Erasing Unnecessary Scenes (ERASE SCENE)

| HDD | DVD-RW |
VR MODE

Selects and erases unnecessary scenes. Even if you erase a scene in a play list, this will not affect the original video.

1 Select "EDIT" at the "EDIT/ERASE" in START MENU, then press **SET/ENTER**.
  • The Thumbnail screen appears.

2 Press **ORIGINAL/PLAY LIST** to display "PLAY LIST" (Thumbnail) screen.

3 Erase the scene using the same operation used for erasing an original scene (step *4* on page 67-step *11* on page 68).

Inputting/Changing Title Name (CHANGE TITLE NAME)

| HDD | DVD-RW |
VR MODE

You can input up to 64 characters.

1 Select "EDIT" at the "EDIT/ERASE" in START MENU, then press **SET/ENTER**.
  • The Thumbnail screen appears.

2 Press **ORIGINAL/PLAY LIST** to display "PLAY LIST" (Thumbnail) screen.

3 Change or input the title name using the same operation used for changing or inputting an original title (steps *4* -*10* on page 69).

Changing Thumbnail (CHANGE THUMBNAIL)

| HDD | DVD-RW |
VR MODE

Changes the image of title displayed in REC LIST to a scene you like in the title.

1 Select "EDIT" at the "EDIT/ERASE" in START MENU, then press **SET/ENTER**.
  • The Thumbnail screen appears.

2 Press **ORIGINAL/PLAY LIST** to display "PLAY LIST" (Thumbnail) screen.

3 Change the thumbnail using the same operation used for changing an original thumbnail (steps *4*-*9* on page 70).

Making Sections in a Title (DIVIDE CHAPTER)

| HDD | DVD-RW |
VR MODE

Divides a title into multiple chapters. This makes editing and dubbing in chapter units more convenient.

1 Select "EDIT" at the "EDIT/ERASE" in START MENU, then press **SET/ENTER**.
  • The Thumbnail screen appears.

2 Press **ORIGINAL/PLAY LIST** to display "PLAY LIST" (Thumbnail) screen.

3 Divide a title into chapters using the same operation used for chapter division of originals (steps *4* -*9* on page 71).

Combining Chapters Together (COMBINE CHAPTERS)

| HDD | DVD-RW |
VR MODE

This lets you combine two adjacent chapters into a single chapter.

1 Select "EDIT" at the "EDIT/ERASE" in START MENU, then press **SET/ENTER**.
  • The Thumbnail screen appears.

2 Press **ORIGINAL/PLAY LIST** to display "PLAY LIST" (Thumbnail) screen.

3 Combine chapters using the same operation used for chapter combination of originals (steps *3* -*8*, left column on page 72).

 NOTE
• You cannot combine chapters automatically recorded when a scene was erased, or chapters recorded due to adding (with ADD SCENE).

Enjoying High Quality Sounds

Playing 2 Channel Audio with an Analogue Connection

The Recorder

To AUDIO
Output jacks

(Red)   (White)

Audio cable
(commercially available)

(Red)   (White)   To amplifier
audio input jacks

Audio equipment, etc.

Jack and Plug Colours
Audio Left: White
Audio Right: Red
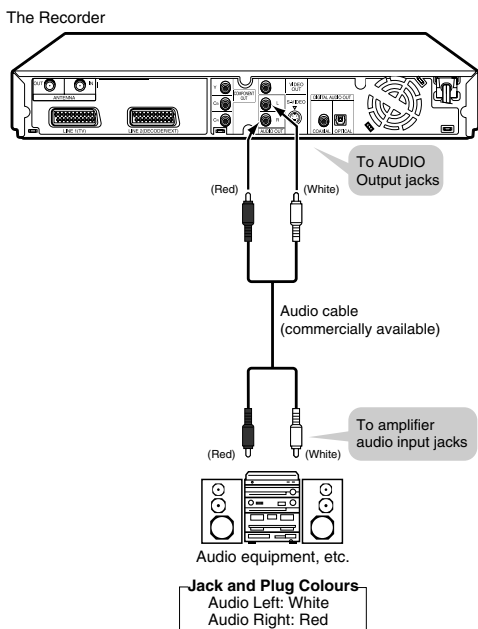
🗋 NOTE

• When connecting audio equipment using analogue connection, we recommend that you set "DD OUTPUT LEVEL" to "NO" (see page **88**).
If you set to "YES", audio may sound abnormal during disc playback.

Playing Dolby Digital, DTS or MPEG Audio with a Digital Connection

• Connecting an amplifier with a Dolby Digital/DTS/MPEG Audio digital surround processor or a Dolby Digital/DTS/ MPEG Audio digital surround amplifier to the Recorder's coaxial or optical DIGITAL AUDIO Output jack (terminal) provides richer, more powerful audio play.
• To enjoy DTS Digital Surround audio, select DTS audio at the disc menu during DVD playback, or select DTS audio using the AUDIO button (under the cover) of the remote control.

■ **Connection to a processor or amplifier with an optical or coaxial digital input jack (terminal)**

The Recorder

DIGITAL AUDIO Output
COAXIAL jack

To DIGITAL
AUDIO Output
OPTICAL terminal

To DIGITAL
AUDIO Output
COAXIAL jack

or

Optical digital cable
(commercially available)

Coaxial digital cable
(commercially available)

To coaxial digital
input jack

To optical digital
input terminal

Dolby Digital/DTS/MPEG
Audio processor or amplifier
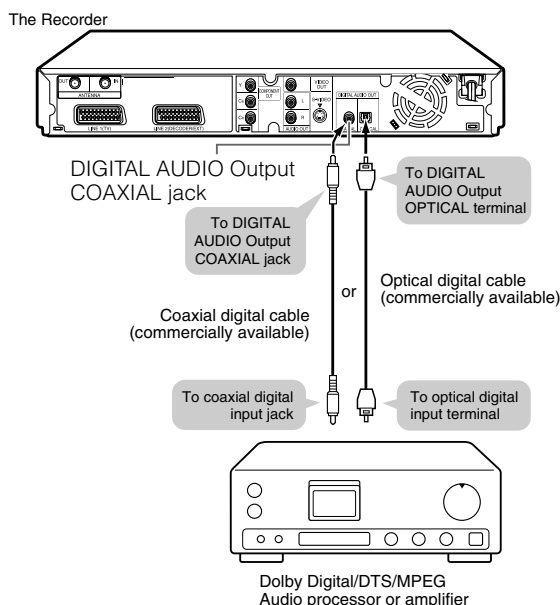
⚠ Important!

• When using this connection, set "DIGITAL AUDIO OUTPUT" to "BIT STREAM" (see page **88**).

🗋 NOTE

• To play a disc recorded with DTS, you need to use DTS processor or amplifier.
• This connection is not possible if the processor or amplifier to which you want to connect does not have an optical or coaxial digital input jack (terminal).
• Refer to the operation manual for the processor or amplifier for information about connecting to it.

Enjoying High Quality Sounds

Playing 2 Channel Audio with a Digital Connection

The Recorder

DIGITAL AUDIO Output
COAXIAL jack

To DIGITAL
AUDIO Output
OPTICAL terminal

To DIGITAL
AUDIO Output
COAXIAL jack

Optical digital cable
(commercially available)

or

Coaxial digital cable
(commercially available)

To coaxial digital
input jack

To optical digital
input terminal

Audio equipment with an
optical or coaxial digital
input terminal
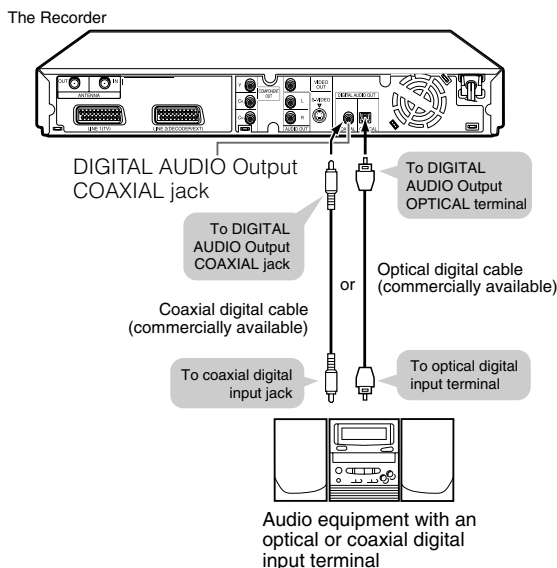
⚠ **Important!**
• When using this connection, set "DIGITAL AUDIO
OUTPUT" to "PCM" (see page **88**).

Digital Connection to an MD Recorder to Record a CD
• When you are using a digital connection to record
the contents of a CD to an MD, the track numbers of
the CD may not match the track numbers recorded
to the MD.

Digital Connection to an MD Recorder or Other Audio Equipment without a Dolby Digital Decoder

Audio CD or Video CD
• You can enjoy these discs by playing them back by the
ordinary playback procedure. (The normal audio output
is not played back for discs recorded with DTS.)

DVD Video Disc
• There is no audio signal generated for DVD video discs
recorded with DTS. A processor or amplifier equipped
with a DTS Surround decoder function is required to enjoy
DTS audio.

Recording from External Equipment

Recording from a Digital Camcorder Using i.LINK

`HDD` `DVD-RW` VR MODE `DVD-RW` VIDEO MODE `DVD-R`

- When this Recorder is connected with a DV-format camcorder using a DV cable, you can record and edit with minimal deterioration of picture and sound quality using a digital signal.
- You can also display an operation panel for digital camcorder control on the screen, and operate using the buttons on the panel. This allows easy recording onto disc. Record after first performing "DV SETTING" (page **90**) at the START MENU.
- * i.LINK is a function that lets you control other equipment by input and output of video, audio, data and control signals between equipment having an i.LINK terminal.
- * i.LINK refers to the IEEE1394-1995 industry specification and extensions thereof. The ⓘ logo is used for products compliant with the i.LINK standard.
- * i.LINK ⓘ is a trademark.

📄 NOTE

- The DV IN terminal of this Recorder only enables input of DV-format camcorders (DVC-SD signals). It is not compatible with satellite receivers or Digital VHS video recorders since they employ a different format.
- To connect the Recorder with a digital camcorder, set digital camcorder POWER to "PLAY (Video side)", and connect while in the stopped state. If the DV is connected when POWER is set to "RECORD (Camera side)", or when tape has been played back, the DV link will not work correctly.
- There are some digital camcorders which cannot be operated using the On-Screen Control Panel of this Recorder, even if you set "DV LINK" under "DV SETTING" to "ON". In cases like this, set "DV LINK" to "OFF". (page **90**)
- When this Recorder is connected to a camcorder equipped with a DV terminal, the signal may not be input to this Recorder depending on the camcorder. When this happens, use an analogue connection (page **83**).
- The DV IN terminal is not compatible with connection to a PC.
- This Recorder cannot be controlled from other equipment connected to the DV IN terminal.
- Only one camcorder can be connected to this Recorder using the DV IN terminal.
- Connect this Recorder and the camcorder directly. The DV signal will not be input if the camcorder is connected to this Recorder through other equipment with a DV IN terminal.

Input of Video, Audio and Data Signals

- ● Date and time data as well as the contents of cassette memory cannot be recorded with this Recorder.
- ● Video and audio signals of protected material or "Copy Once" material cannot be recorded.
- ● Monaural audio cannot be input through the DV IN terminal.

Audio Mode

Digital camcorders typically have the following two audio modes.

16-bit (48 kHz)
Although this yields high sound quality, only one stereo audio signal can be processed.

12-bit (32 kHz)
Two stereo signals can be processed. In general, overdubbed audio is recorded in Stereo 2.

- ● This Recorder allows listening or recording of either Stereo 1 or Stereo 2 audio if the input audio is in the 12-bit audio mode.
- ● This Recorder is unable to process 44.1 kHz input audio signals.

Connecting a Digital Camcorder Using the DV IN Terminal (i.LINK)

Refer to the user's manual provided with the camcorder for information on the procedure for connecting the camcorder with this Recorder.

The Recorder

To DV IN terminal

Digital camcorder

To DV terminal

DV cable (commercially available)

Before connecting, set the power switch of the digital camcorder to "Video (Playback)" and stop the camcorder.
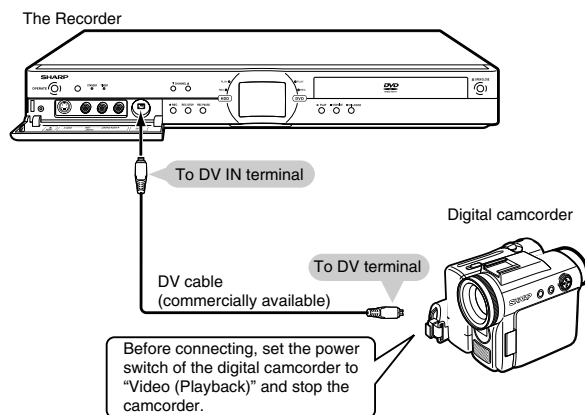
Recording from External Equipment

Recording with This Recorder (DV Capture)

1 Press **HDD** or **DVD** to select the media to record to.

2 Select audio to be input from the digital camcorder.
- Before starting recording, check setting of "DV AUDIO INPUT" using "DV SETTING" (page **90**).

3 Press **INPUT** to select "DV".
- The setting will cycle as follows each time you press the button.

```
        ┌────────→ L1 (IN 1) → L2 (IN 2) ─────────┐
        └─ TV channels ← DV (DV IN) ← L3 (IN 3) ←─┘
```
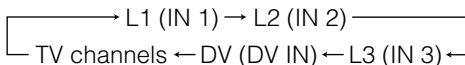
4 Perform digital camcorder playback.
- Press ▲/▼/◀/▶ to select the desired button on the On-screen Control Panel, then press **SET/ENTER** to operate.

When "DV LINK" is set to "ON"

```
┌────────────────────────────────────────────────┐
│ DV LINK (ENABLES CONTROL OF DV CAMCORDER)        │
│                                                  │
│   ▶ PLAYBACK        ◀▮    ▮▮    ▮▶               │
│   00 : 00 : 10      ◀◀    ▶    ▶▶                │
│   ▭               PLAYBACK ◀▮  ▮  ▮▶             │
│                                                  │
│   ◀▷ SELECT   (ENTER) ENTER   (EXIT) EXIT        │
└────────────────────────────────────────────────┘
```
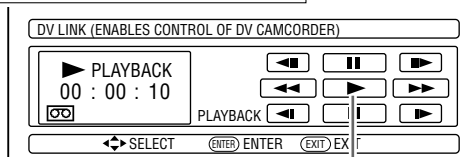
Select ▶ on the On-screen Control Panel to start playback, then press **SET/ENTER**.

- If you press **EXIT** on the remote control, the On-screen Control Panel will disappear. To display it again, press **ON SCREEN** (under the cover).

5 Press ●**REC** when you reach the scene you want to start recording.
- The Recorder will start recording.

6 Press **REC PAUSE** when you want to pause recording.
- Press **REC PAUSE** again to cancel pause.

7 Press **REC STOP** when you want to stop (end) recording.

📄 NOTE
- Material protected with a copy guard cannot be recorded.
- Date and time data as well as the contents of cassette memory cannot be recorded.
- There are some digital camcorders which cannot be operated using the On-screen Control Panel, even when "DV LINK" is set to "ON". In such cases, set it to "OFF". (See page **90**.)

> **⚠ Important!**
> **Abnormal images may be recorded or the Recorder enters the Pause mode when any of the following occur during DV capture.**
> - When the connected equipment plays back a portion where nothing is recorded or video containing a copy guard signal.
> - When the DV cable is disconnected or the camcorder power is turned off during DV capture.
> - When playback from the camcorder is stopped.

Recording from a Camcorder (VCR) Using an Analogue Connection

HDD   DVD-RW   DVD-RW   DVD-R
      VR MODE   VIDEO MODE

Material from a camcorder can be recorded with this Recorder using an analog connection. You can capture video by connecting a camcorder or VCR to the LINE IN 1, 2 or 3 jacks of this Recorder.

📄 NOTE

• More vivid images can be viewed by connecting the S-VIDEO input jack on this Recorder with the S-video output jack on the camcorder using an S-video cable.
• Some camcorders may be required to be connected using a special cable.
• Refer to the operation manual provided with the camcorder for further information on the procedure for connecting the camcorder.
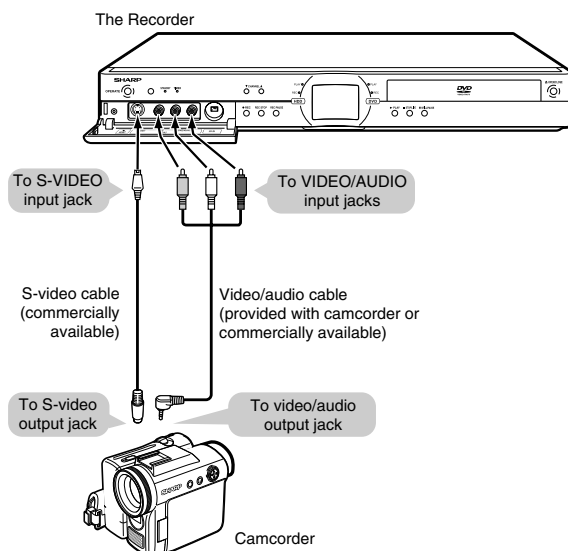• Material protected with a copy guard cannot be recorded. It may be impossible to get the correct video, even if you just view without recording.
• Date and time as well as the contents of cassette memory cannot be recorded with this Recorder.
• If you input video from an external device to this Recorder, there will be a slight difference in image quality between the video viewed from the external device directly on the TV, and video viewed as external input to the Recorder.

Example:
To record by connecting a camcorder to the LINE IN 3 jacks.

The Recorder

To S-VIDEO input jack   To VIDEO/AUDIO input jacks

S-video cable (commercially available)   Video/audio cable (provided with camcorder or commercially available)

To S-video output jack   To video/audio output jack

Camcorder

1 **Press HDD or DVD to select the media to record to.**

2 **Select audio to be input from the external device.**
   To record to HDD
   • Switch audio of the external device to the audio you want to capture.
   To record to DVD
   • Select audio using "EXTERNAL AUDIO" (page **84**).
   • Select "L CH" or "R CH" with "VIDEO MODE AUDIO" (page **84**) to record in Video mode.

3 **Press INPUT to set the connection to external input channel (example: L3).**
   • The setting will cycle as follows each time you press the button.

   ┌────────→ L1 (IN 1) → L2 (IN 2) ──────┐
   └─ TV channels ← DV (DV IN) ← L3 (IN 3) ←┘
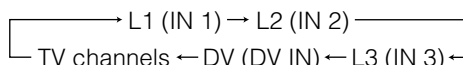
4 **Play back the camcorder or VCR.**

5 **Press ●REC when you reach the scene you want to start recording.**
   • The Recorder starts recording.

6 **Press REC PAUSE when you want to pause recording.**
   • Press REC PAUSE again to cancel Pause mode.

7 **Press REC STOP when you want to stop (end) recording.**

Function Setting

Functions under OTHER SETTINGS 1

This section explains various settings relating to recording and playback which can be used to get more out of the Recorder.
• For details about each setting, see the corresponding pages.

REC. FUNCTION → page 84
VIEW/PLAY SETTING → page 86
ADJUSTMENT → page 88

REC. FUNCTION

AUTO CHAPTER	
• This sets the interval of automatic chapter setting during recording. • Chapter marks set on a DVD-RW/R in Video mode cannot be combined by editing, so select an appropriate interval.	10 (10 min interval) 15 (15 min interval) 30 (30 min interval) –– (off)

EXACT RECORDING	
• This function works when timer recording (SʜᴏᴡVɪᴇᴡ/Timer Programme) onto DVD-RW/R. If disc capacity runs low, and the programme cannot be recorded to the end, this function will automatically change the recording mode so the programme will fit. (The recording mode set in above situation will have lower picture quality than the originally set recording mode.) • If there is very little disc capacity left on the disc, the programme may not fit even if Exact Recording is set. • When recording in EP or MN1 mode, there is no lower recording mode, so Exact Recording will not work.	YES NO

REC. AUDIO FORMAT	

• PCM: If you record by setting the recording mode to "FINE" or "MN32", you can record audio as PCM (uncompressed) audio which can be played back with 2ch audio equipment.
  * This will not work when recording with the recording mode set to anything other than "FINE" or "MN32".
  * Recording is done with a recording mode whose image quality is slightly lower than FINE mode recorded with the "MPEG" setting.
• When making a PCM recording of bilingual sound, only the audio selected in "VIDEO MODE AUDIO" is recorded.
• MPEG: Records audio as MPEG audio.
	PCM
	MPEG

EXTERNAL AUDIO	

• This selects audio to be input from an external device.
  * Be sure to always select "BILINGUAL" when recording bilingual sound. If you select "STEREO" when recording, the audio for the left channel ("L CH") and right channel ("R CH") will be heard together during playback.
  * When recording bilingual sound, you can switch between the left channel ("L CH") and right channel ("R CH") during playback in VR mode. In Video mode, only the audio set in "VIDEO MODE AUDIO" is recorded.
	STEREO
	BILINGUAL

VIDEO MODE AUDIO	
• This selects whether to record the left channel ("L CH") or right channel ("R CH") when recording (or dubbing) bilingual sound to DVD-RW/R in Video mode. * This does not apply when recording from the DV IN terminal.	L CH R CH

MANUAL REC. MODE	
• If you set by selecting one of the 32 picture quality levels for "MN", recording will be done at that picture quality when "MN" is selected using **REC MODE** on the remote control. For details, see page **37**.	32 levels
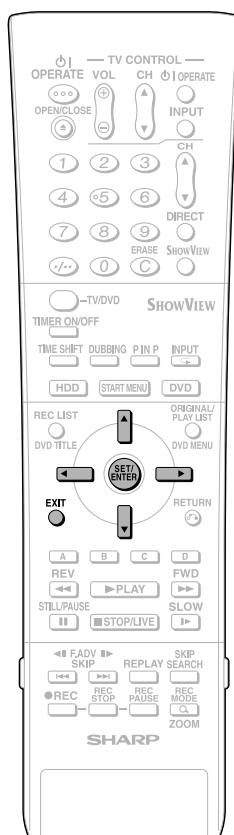
Basic Operation for REC. FUNCTION Setting

This operation is available in both HDD mode and DVD mode.

Example: Setting "EXTERNAL AUDIO" under "REC. FUNCTION"

1 ① **Press START MENU to display "START MENU" screen.**
② **Press ▲/▼/◀/▶ to select "OTHER SETTINGS 1", then press SET/ENTER.**

```
■ START MENU[OTHER SETTINGS 1]              25/12 10:28
    [REC LIST]        [EDIT/        [DUBBING]
                       ERASE]
    [TIMER         [INITIALIZE/     [OTHER
     PROGRAM/       FINALIZE]        SETTINGS 1]
     CHECK]
                  DISPLAYS SET ITEMS BEFORE REC/PLAYBACK
    [OTHER         [INFORMATION]
     SETTINGS 2]
```

2 **Press ◀/▶ to select "REC. FUNCTION".**

```
■ OTHER SETTING 1[REC. FUNCTION]           25/12 10:28
REC. FUNCTION    VIEW/PLAY SETTING    ADJUSTMENT
AUTO CHAPTER
EXACT RECORDING
REC. AUDIO FORMAT
EXTERNAL AUDIO
VIDEO MODE AUDIO
MANUAL REC. MODE
```
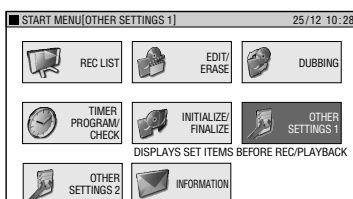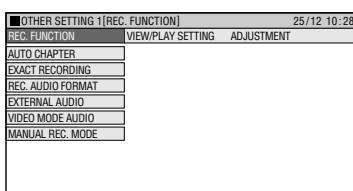
3 **Press ▲/▼ to select "EXTERNAL AUDIO", then press SET/ENTER.**

```
■ OTHER SETTINGS 1[REC. FUNCTION]          25/12 10:28
REC. FUNCTION    VIEW/PLAY SETTING    ADJUSTMENT
AUTO CHAPTER
EXACT RECORDING
REC. AUDIO FORMAT
EXTERNAL AUDIO
VIDEO MODE AUDIO
MANUAL REC. MODE
```

4 **Press ◀/▶ to select the option you want to set, then press SET/ENTER.**

```
■ OTHER SETTINGS 1[EXTERNAL AUDIO]         25/12 10:28


       SELECT EXTERNAL AUDIO MODE WHEN
       RECORDING FROM EXTERNAL EQUIPMENT.


          STEREO          BILINGUAL


   ◀ ▶ SELECT     ENTER ENTER      RETURN
```

5 **Press EXIT to exit from External Audio Setting.**

Function Setting

VIEW/PLAY SETTING

PASSWORD SETTING	**PASSWORD**	
	• This sets the password for setting or changing Parental Control.	4 digit number
DVD PLAY SETTING	**PARENTAL CONTROL** • This lets you set Parental Control depending on disc content. • Level 1: For most restricted viewing → Level 8: For adult viewing (The smaller the number, the greater the level of restriction.) • When "PARENTAL CONTROL" is set to "OFF", DVD discs can be played back regardless of the parental level. • Parental Control cannot be set if a password has not been set.	OFF, LEVEL:1-8 COUNTRY CODE * Refer to the Country Code List below.
	DISC LANGUAGE • This lets you select the language for subtitle, audio and menu displayed on the screen.	SUBTITLE AUDIO MENU * Refer to the Language Code List below.

Country Code List

USA	UK	HOLLAND	HONG KONG	TAIWAN
CANADA	ITALY	NORWAY	SINGAPORE	PHILIPPINE
JAPAN	SPAIN	DENMARK	THAILAND	AUSTRALIA
GERMANY	SWISS	FINLAND	MALAYSIA	RUSSIA
FRANCE	SWEDEN	BELGIUM	INDONESIA	CHINA

Language Code List

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

Basic Operation for VIEW/PLAY SETTING

This operation is available in both HDD mode and DVD mode.

Example: Setting "DVD PLAY SETTING" under "VIEW/PLAY SETTING"

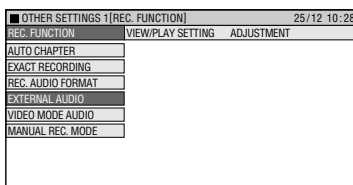**1** ① **Press START MENU to display "START MENU" screen.**
② **Press ▲/▼ / ◀/▶ to select "OTHER SETTINGS 1", then press SET/ENTER.**

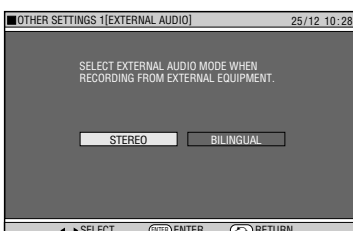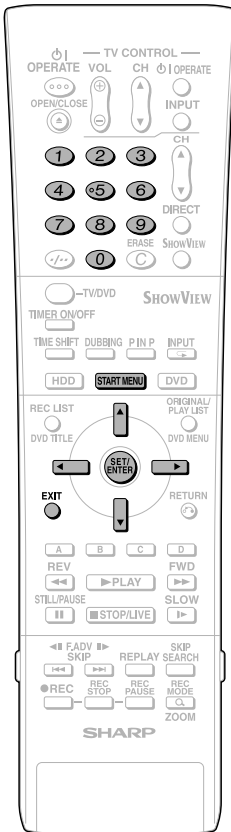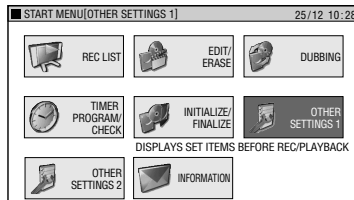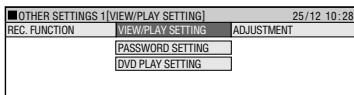|		
REC LIST	EDIT/ERASE	DUBBING
TIMER PROGRAM/CHECK	INITIALIZE/FINALIZE	OTHER SETTINGS 1
OTHER SETTINGS 2	INFORMATION	

DISPLAYS SET ITEMS BEFORE REC/PLAYBACK

2 **Press ◀/▶ to select "VIEW/PLAY SETTING", then press SET/ENTER.**

OTHER SETTINGS 1[VIEW/PLAY SETTING]   25/12 10:28
REC. FUNCTION   VIEW/PLAY SETTING   ADJUSTMENT
PASSWORD SETTING
DVD PLAY SETTING

3 **Press ▲/▼ to select "DVD PLAY SETTING", then press SET/ENTER.**

OTHER SETTINGS 1[VIEW/PLAY SETTING]   25/12 10:28
REC. FUNCTION   VIEW/PLAY SETTING   ADJUSTMENT
PASSWORD SETTING
DVD PLAY SETTING
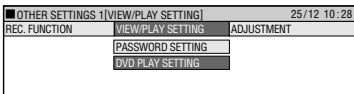
4 **Press ▲/▼ to select "PAREN-TAL CONTROL", then press SET/ENTER.**
• The password input screen appears. It changes to the following screen after you input your password and press **SET/ENTER**.

OTHER SETTINGS 1[DVD PLAY SETTING]   25/12 10:28
PARENTAL CONTROL
DISC LANGUAGE   SETS THE PARENTAL CONTROL OF DVD VIDEO
SET THE PARENTAL CONTROL LEVEL
◀   OFF   ▶
SET THE COUNTRY CODE
FRANCE
◀ ▶SELECT   (ENTER)ENTER   RETURN
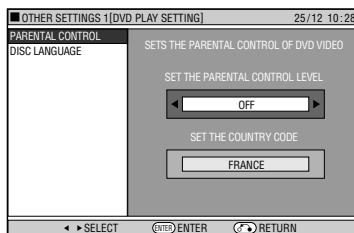
5 **Press ◀/▶ to select the desired parental control level, then press SET/ENTER.**

6 **Press ◀/▶ to select the country code, then press SET/ENTER.**

7 **Press EXIT to exit from Parental Control Setting screen.**

Password Setting

① **Select "PASSWORD SETTING" in step 3, then press SET/ENTER.**
② **Press ◀/▶ to select "YES", then press SET/ENTER.**
③ **Press Number buttons to input 4 digit password, then press SET/ENTER.**
④ **Press Number buttons to input password for confirmation, then press SET/ENTER.**
⑤ **Press SET/ENTER at the "OK" screen.**

NOTE
If you forget your password
• If you forget your password, and you wish to return the password to its initial state, press ■STOP/LIVE 4 times in a row at the Password Setting screen.

Disc Language Setting

• You can set subtitle language, audio language and menu language.

① **Select "DISC LANGUAGE" in step 4, then press SET/ENTER.**
② **Press ◀/▶ to select subtitle language, then press SET/ENTER.**
③ **Press ◀/▶ to select audio language, then press SET/ENTER.**
④ **Press ◀/▶ to select menu language, then press SET/ENTER.**

Function Setting

ADJUSTMENT

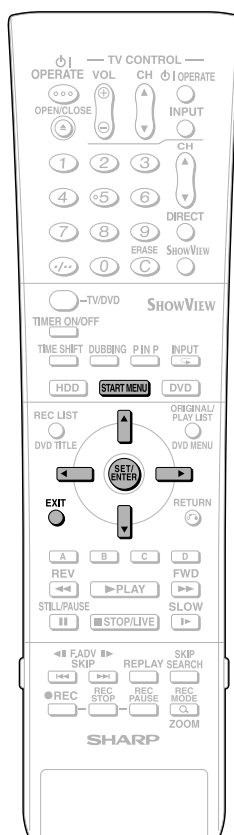| VIDEO/ AUDIO SET- TING	## TV MODE	

	• If you switch your TV (i.e. because you have bought a new one) and the screen size of the connected TV changes, you will have to change the "TV MODE" setting.
	• You can set the screen aspect ratio of the connected TV, and adjust video output.
	• Select "TV MODE" from "VIDEO/AUDIO SETTING".
	  WIDE 16:9: Select this when connecting with a TV with a 16:9 screen aspect ratio.
	  NORMAL 4:3: Select this when connecting with a TV with a 4:3 screen aspect ratio.
	  LETTER BOX: If you connect with a TV whose screen aspect ratio is 4:3 and playback a DVD with 16:9 video, the video will be played back with black bands at the top and bottom, while maintaining the 16:9 ratio.
	  PAN SCAN: If you connect with a TV whose screen aspect ratio is 4:3 and playback a DVD with 16:9 video, the video will be played back with the left and right sides of the image cut off to display in 4:3 screen aspect ratio. (This function works if the disc is labeled for 4:3PS.)
		WIDE 16:9
		NORMAL 4:3
		  LETTER BOX
		  PAN SCAN

	## DIGITAL AUDIO OUTPUT	

	• You can set this to enjoy Dolby Digital sound, DTS or MPEG sound when connecting with digital input compatible device using Digital cable.
	  PCM: This setting is for when you digitally connect with 2ch audio device or an MD recorder. This changes Dolby Digital sound, DTS or MPEG sound to PCM (uncompressed) output which can be played back with 2ch audio device.
	  BIT STREAM: This setting is for when you digitally connect with audio device which is compatible with Dolby Digital sound, DTS or MPEG sound.
	
	  You can also enjoy DTS audio if you connect with an amplifier or other component which is compatible with DTS digital surround.
	
	  NOTE
	  • When a DTS signal is input, the data is output as a bit stream even if "DIGITAL AUDIO OUTPUT" is set to "PCM".
		PCM
		BIT STREAM

	## DD OUTPUT LEVEL	

	• This lets you adjust the range between the loudest and softest sound (dynamic range), and play back at the average volume. Use this when it is hard to hear dialog.
	  NO: This outputs recorded audio as is.
	  YES*: This raises the average volume when playing back Dolby Digital audio so that the volume sounds the same as an audio CD. (If the audio sounds abnormal, set to "NO".)
	  * Lower the volume before setting. If you do not do so, the speaker may emit a loud sound, or excessive input may be applied to the speaker.
		NO
		YES

ADJUSTMENT

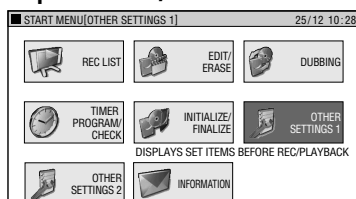| VIDEO/ AUDIO SET-TING	**DNR (DIGITAL NOISE REDUCTION)**	
	• This lets you reduce noise for an easier to view picture when noise in the played back image is bothering you. It is recommended to set this to "ON" when playing back video recorded in long play modes like LP mode or EP mode, and to "OFF" when playing back discs with little noise (like DVD video).	ON OFF
OPTION SETTING	**HI SP DUB PRIORITY**	
	• To perform high speed dubbing from the HDD to a DVD in Video mode, set this to "YES" before recording to the HDD. • If you wish to edit in frame units, set this to "NO". For details of "HIGH SPEED DUBBING PRIORITY", refer to page **45**.	YES NO
	SEAMLESS PLAYBACK	
	• This setting is for smoother playback of the transitions between scenes when you have edited an original title or play list. (The transition point may shift about one second.)	YES NO
	ALTERNATE RECORDING	
	• This function is for switching recording to HDD when you originally set to record to DVD-RW/R but could not because of the disc situation. This function works in the following cases. * ① When there is not enough disc capacity left in DVD. ② When a disc which cannot record is loaded. ③ When you forget to load a disc. ④ When a disc is playing within 2 minutes prior to the start of timer recording. * In case ①, when the remaining capacity of HDD is less than that of DVD, the recording will continue on to DVD.	YES NO

Function Setting

ADJUSTMENT

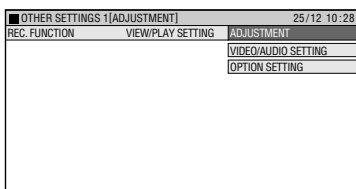| OPTION SETTING		
	LCD BACKLIGHT REC.	NO YES
	• This sets whether to turn the LCD backlight on or off during timer recording. NO: This sets so that the LCD backlight remains lit, even during timer recording. YES: This lets you turn off the LCD backlight only when the power is off (standby state) and timer recording starts. It is convenient to set this, for example, when the light disturbs your sleep.	
	AUTO POWER OFF	YES NO
	• This sets the Recorder so that power is automatically shut off if it is in stopped state for about 3 hours.	
	BLUE SCREEN	OFF ON
	• This lets you set so that noise on the TV screen is automatically switched to a blue screen if you select a channel whose broadcast is finished, or a channel with no broadcast.	

	DV SETTING	DV LINK
		  OFF
		  ON
		DV AUDIO INPUT
		  STEREO 1
		  STEREO 2
		  STEREO 1
		  + STEREO 2

	• This lets you operate the connected digital camcorder from the Recorder when capturing video into the Recorder via a DV connection. You can also select the type of audio to be captured from the camcorder.
	DV LINK
	  OFF:
	  Select this when you cannot operate the camcorder properly with the On-screen Control Panel.
	  ON:
	  This lets you operate the camcorder using the On-screen Control Panel.
	DV AUDIO INPUT
	  STEREO 1*:
	  This lets you capture audio you recorded with the camcorder.
	  STEREO 2*:
	  This lets you capture camcorder's audio you recorded using after recording.
	  STEREO 1 + STEREO 2*:
	  This lets you simultaneously capture audio from stereo 1 and audio from stereo 2.
	  * When the connected digital camcorder's audio output is set to 16 bit, this setting will be invalid.	

	DVD DISC PROTECTION	NOT PROTECT PROTECT
	• This protects the disc so you do not mistakenly record on it or erase its content.	

Basic Operation for ADJUSTMENT Setting

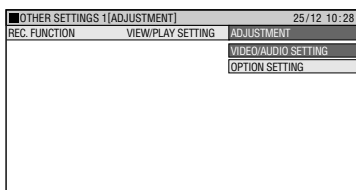**Example:** Setting "VIDEO/AUDIO SETTING" under "ADJUSTMENT"

1 ① **Press START MENU to display START MENU screen.**
② **Press ▲ / ▼ / ◄ / ► to select "OTHER SETTINGS 1", then press SET/ENTER.**

REC LIST	EDIT/ERASE	DUBBING
TIMER PROGRAM/CHECK	INITIALIZE/FINALIZE	OTHER SETTINGS 1
OTHER SETTINGS 2	INFORMATION	

DISPLAYS SET ITEMS BEFORE REC/PLAYBACK

2 **Press ◄ / ► to select "ADJUST-MENT".**

OTHER SETTINGS 1[ADJUSTMENT] 25/12 10:28
REC. FUNCTION   VIEW/PLAY SETTING   ADJUSTMENT
VIDEO/AUDIO SETTING
OPTION SETTING

3 **Press ▲ / ▼ to select the setting you want to set, then press SET/ENTER.**

OTHER SETTINGS 1[ADJUSTMENT] 25/12 10:28
REC. FUNCTION   VIEW/PLAY SETTING   ADJUSTMENT
VIDEO/AUDIO SETTING
OPTION SETTING

4 ① **Press ▲ / ▼ to select the item you want to select, then press SET/ENTER.**

OTHER SETTINGS 1[VIDEO/AUDIO SETTING] 25/12 10:28
TV MODE
DIGITAL AUDIO OUTPUT   SELECT TV MODE
DD OUTPUT LEVEL
DNR

WIDE 16:9   NORMAL 4:3

◄ ►SELECT   (ENTER)ENTER   (↩)RETURN

② **Press ◄ / ► to select the desired option, then press SET/ENTER.**

5 **Press EXIT to exit.**

Function Setting

Functions under OTHER SETTINGS 2

This section explains various settings relating to input/output of video/audio signal, TV channel preset and clock.
• For details about each setting, see the corresponding pages.

MODE SETTING → **page 92**
MANUAL TUNING → **page 94**
CHANNEL SORT → **page 94**
CLOCK SETTING → **page 94**

MODE SETTING

NICAM	
• This recorder can receive and record NICAM or A2 broadcasts. NICAM broadcasts will be received when "AUTO" is selected in the NICAM setting. Depending on the received programme, some NICAM or A2 broadcasts may not be in stereo.	AUTO OFF
L1 OUT	
• This sets the type of video signal output from L1 (TV) according to the specification of connected TV. 📄 **NOTE** • To view an RGB output video, press the **TV/DVD** button on the remote control and switch to DVD mode.	Y/C RGB COMP.
L2 IN	
• This sets the type of video signal input from L2 (DECODER/EXT).	Y/C COMP.

Basic Operation for MODE SETTING

Example: Setting "NICAM" under "MODE SETTING"

1 Press **START MENU** to display the "START MENU" screen.

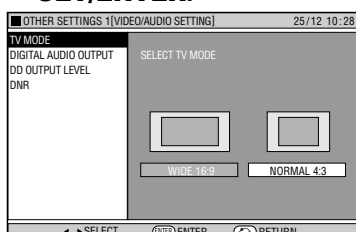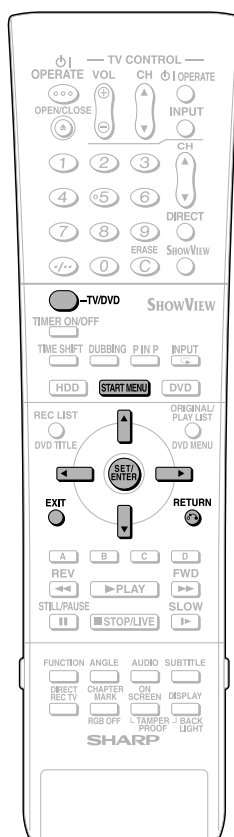**2** Press ▲/▼/◀/▶ to select "OTHER SETTINGS 2", then press **SET/ENTER**.

3 Press ▲/▼ to select "MODE SETTING", then press **SET/ENTER** to confirm.
  • The MODE menu is displayed with NICAM selected.

```
■ NICAM          ◀  AUTO  ▶
  L1 OUT         ◀  Y/C   ▶
  L2 IN          ◀  Y/C   ▶




  ▲ ▼ : SELECT    ◀ ▶ : CHANGE
  ENTER : ENTER   ☎ : RETURN
```

4 Press◀/▶ to select "OFF".

5 Press **SET/ENTER** to confirm and return to the menu screen.

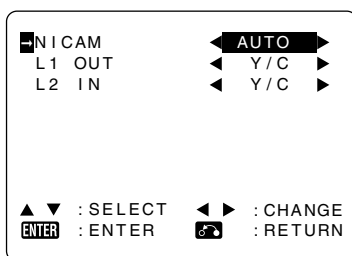**6** Press **START MENU** or **EXIT** to exit to normal screen.

About NICAM/A2

This recorder can receive and record NICAM or A2 broadcasts. NICAM broadcasts will be received when "AUTO" is selected in the NICAM setting. Depending on the received programme, some NICAM or A2 broadcasts may not be in stereo.

NICAM Broadcast

The monitor output listed in the table shows the audio output mode. The contents of audio recording are different between VR mode and Video mode. See the tables below for details.

About audio recording

Broadcast	EXTERNAL AUDIO / VIDEO MODE AUDIO	RECORDING AUDIO			
		VR MODE		VIDEO MODE	
		L	R	L	R
NICAM/A2 STEREO	STEREO				
		L	R	L	R
	BILINGUAL L				
		L	R	L	R
	BILINGUAL R				
		L	R	L	R
NICAM/A2 BILINGUAL	STEREO				
		L	R	L	R
	BILINGUAL L				
		L	R	L	L
	BILINGUAL R				
		L	R	R	R
NICAM/A2 MONO	STEREO				
		MONO	MONO	MONO	MONO
	BILINGUAL L				
		MONO	MONO	MONO	MONO
	BILINGUAL R				
		MONO	MONO	MONO	MONO

· When making a PCM recording of bilingual sound, only the audio selected in "VIDEO MODE AUDIO" is recorded.
· When recording audio in the PCM format with the recording mode set to "FINE" or "MN32", audio is recorded in the same format as recorded to DVD-RW/R disc in Video mode.
· When a disc recorded in monaural audio is playback, monaural audio is played back even though "STEREO" is displayed on the screen.

About audio selection

Broadcast	Audio Mode* Displayed on screen	Display of Broadcast Received	Display of Audio Received	Audio Output	
				L	R
NICAM STEREO	MONO	NICAM STEREO	–	L+R	L+R
	L R	NICAM STEREO	L R	L	R
NICAM BILINGUAL	L R	NICAM I/II	L R	L	R
	L	NICAM I/II	L	L	L
	R	NICAM I/II	R	R	R
NICAM MONO	MONO	NICAM	–	MONO	MONO
STEREO (Except NICAM)	MONO	STEREO	–	L+R	L+R
	L R	STEREO	L R	L	R
BILINGUAL (Except NICAM)	L R	I/II	L R	L	R
	L	I/II	L	L	L
	R	I/II	R	R	R
MONO (Except NICAM)	MONO	–	–	MONO	MONO

* Audio mode is selected with the **AUDIO** button on the remote control.

Function Setting

MANUAL TUNING*¹

PRESET	1 - 84
• This lets you preset the channels into memory. A maximum of 84 channels can be preset.	
SYSTEM	L
• This lets you select the broadcast system (PAL-B/G, SECAM-L).	B/G
CHANNEL	CHXX
• For details, see "Channel Setting" on page **26**.	
FINE TUNING	
• This lets you obtain sharp colour picture.	
DECODER	ON
• If there have a separate decoder connected to the L2 terminal of the Recorder, set this function to "ON" in order to record the unscrambled signal and/or watch it on your TV.	OFF
SKIP	ON
• This determines whether the channel can be selected when using **CH ▲/▼** instead of **Number buttons**.	OFF

*¹ For details, see page **26**.

CHANNEL SORT*²

MOVE	
• When your Recorder tunes in broadcast channels automatically, it sorts them into a standard order using internal information. The "MOVE" function lets you change the order of the channel.	
CANCEL	
• This lets you delete a channel from the Recorder memory.	
NAME	
• When your Recorder tunes in broadcast channels automatically, it names them using the VPS/PDC information. The "NAME" function lets you change the name of the channel.	

*² For details, see pages **26**, **27**.

CLOCK SETTING*³

CLOCK	TIME:XX:XX(24H)
• The clock will normally be set using the VPS/PDC information when your Recorder automatically tunes in the broadcast channels. If for any reason the VPS/PDC signals are not present, your Recorder will not be able to set the clock. The "CLOCK" function lets you set the clock manually.	DATE:Day/Month YEAR:XX ADJUST: ∗:AUTO/-:OFF

*³ For details, see page **25**.

Initialization

Before recording to DVD-RW, initialize the disc in VR mode or Video mode.
You can also initialize the HDD. Initialize the HDD only after dubbing important recordings onto DVD-RW/R disc(s).

Finalization

Finalization is done so that a recorded DVD-RW/R disc can be played back with other recorders.

INITIALIZE

INITIALIZE		
	DVD VR MODE INIT. • When recording with a DVD-RW in VR mode, initialize in VR mode before you start recording. (When you initialize, all of the recorded content of the disc is erased. Before initializing, check the content of the disc so that you do not erase any content you need.) • You cannot initialize if "DVD DISC PROTECTION" is set to "PROTECT". (page **90**)	YES NO
	DVD VIDEO MODE INIT. • When recording with a DVD-RW disc in Video mode, initialize in Video mode before you start recording. (When you initialize, all of the recorded content of the disc is erased. Before initializing, check the content of the disc so that you do not erase any content you need.) • You cannot erase with DVD-R disc.	YES NO
	AUTO INITIALIZE • This sets the Recorder so it automatically initializes any unused DVD-RW discs which are loaded into the Recorder. You can initialize in either VR mode or Video mode.	VR VIDEO
	HDD INITIALIZE • If an HDD error message is displayed, or if you wish to return the HDD to the state it was in when the Recorder was purchased, initialize the HDD. All recorded video will be erased. (If you use the "ERASE ALL TITLES" function to erase the titles, protected titles will remain, but if you use the HDD initializing function, all titles will be erased.) Dub any important recordings to DVD-RW/R disc(s) before initializing the HDD.	YES NO

FINALIZE

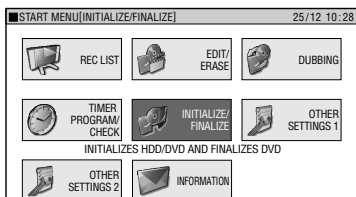| DVD FINALIZE		
	DVD FINALIZE • Set this when you want to playback a VR mode or Video mode disc using another recorder capable of playback. If you finalize a recording on DVD-R disc, you will not be able to record any more on the disc. • Finalization can take anywhere from a few minutes to one hour. During finalization, all types of operation are disabled (including turning off power and removing the disc). • Do not unplug the power cord during finalization. Doing so may make the disc unusable.	YES NO
	UNDO DVD FINALIZE • This resets a finalized DVD-RW disc so you can record on it again.	YES NO

Function Setting
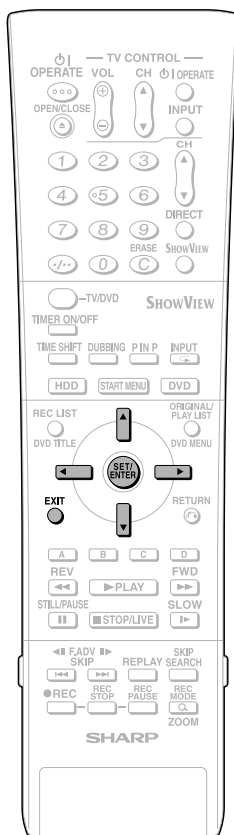
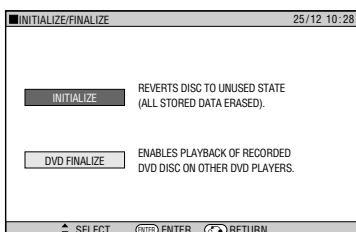
Basic Operation for INTIALIZE/FINALIZE

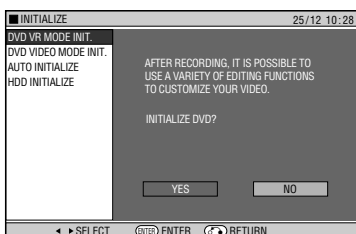**Example:** Setting "DVD VR MODE INIT." (VR mode)

1
① **Press START MENU to display "START MENU" screen.**
② **Press ▲/▼/◀/▶ to select "INITIALIZE/FINALIZE", then press SET/ENTER.**

2
Press ▲/▼ to select "INITIAL-IZE" or "FINALIZE", then press SET/ENTER.

3
Press ▲/▼ to select "DVD VR MODE INIT.", then press SET/ENTER.

4
① **Press ◀/▶ to select "YES", then press SET/ENTER.**
• Initializing (or finalizing) will be executed.
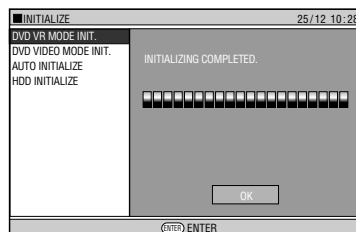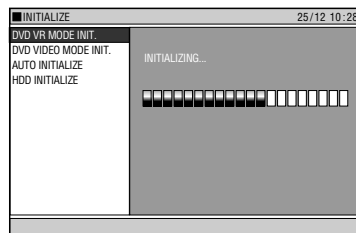
• Initializing (or finalizing) will be completed.
② **Press SET/ENTER.**
• Screen in step **2** appears.

5
Press EXIT to exit from "INITIALIZE/FINALIZE" screen.

▷ NOTE
• Finalization processing will take anywhere from a few minutes to about an hour. (Processing will take time if there is a lot of empty space or if there are many titles on the DVD disc.)

Troubleshooting

The following problems do not always suggest a defect or malfunction of this Recorder.
Perform the checks listed below before calling customer service tel. no. 0820 856 333.

Problem	Suggested Solution
The Recorder power does not turn on.	• Is the power cord firmly plugged into the AC outlet? • If the power cord is plugged into the outlet, unplug it once, wait about one minute, and then plug it in again. Then turn power on.
The Recorder sounds like it is operating, even when power is turned off.	• This is the sound the Recorder makes during operation like timer recording.
The disc is automatically ejected after closing the disc tray.	• Make sure that the disc is loaded properly (aligned in disc tray and label-side up). • Take out the disc and clean it. • Make sure that region number on the disc match the region number in this Recorder. • Make sure that the disc is playable.
No picture.	• Make sure that the cables are connected correctly. • Make sure that the connected TV or the AV amplifier is set to the correct input. • Take out the disc and clean it. • Make sure that region number on the disc match the region number in this Recorder.
The Recorder does not play a disc.	• Take out the disc and clean it. • Make sure that the disc is loaded properly (aligned in disc tray and label-side up). • Make sure that region number on the disc match the region number in this Recorder. • Remove the dew in the Recorder. • Check that the disc is recorded in PAL format. • The Recorder cannot playback video which was not recorded normally. • Proper playback may be impossible due to the state of the disc recording, a scratched, warped or dirty disc, the state of the pick-up, or compatibility issues between this Recorder and the disc being used.
Settings have disappeared.	• If, while its power is on, the Recorder is unplugged (or there is a power failure) for more than about 1 hour, the settings will be lost. Make sure that you turn off the Recorder before unplugging the power cord.
Screen freezes and operation buttons do not work.	• Press ■**STOP/LIVE** and restart playback. • Turn off the power and turn on the power again. • If power does not go off, press the **RESET** button inside the front door of the Recorder.(Page **99**)
The remote control does not work.	• Is the Tamper Proof function active?(Page **33**) • Set the remote control and the Recorder to the same remote control code.(Page **19**) • Use the remote control within its operating range. • Replace the batteries.
No sound or sound is distorted.	• If the volume of TV or amplifier is set to minimum, turn the volume up. • There is no sound during still mode, slow motion playback, fast forward and fast reverse. • DVD audio recorded in DTS is only output from the DIGITAL AUDIO Output terminals. Connect a DTS-compatible digital amplifier or decoder to the DIGITAL AUDIO Output OPTICAL or COAXIAL terminal on this Recorder. • Check that the audio cable is connected correctly. • Check that the cable plugs are clean. • Take out the disc and clean it. • Audio may not be output depending on the audio recording status, such as when audio other than an audio signal or non-standard audio is recorded for the audio content of the disc.
The picture from external input is distorted.	• If the signal is copy-protected, you cannot connect via this Recorder. Connect the external equipment directly to your TV.
The screen is stretched vertically or horizontally.	• Set the TV mode according to the TV you are connecting.(Page **88**) • If the above operation does not set the TV mode, set it using the functions of the connected TV.
A disc recorded using this Recorder cannot be played back on another DVD player.	• Check that the disc is finalized when the disc is in video mode. • Some players will not play even a finalized disc. • If the disc was recorded in VR mode, it can only be played back with an RW compatible player. (In some cases, the disc must be finalized.)

Troubleshooting

| Problem	Suggested Solution
The playback screen will be disturbed if DVD video is recorded to a VCR, or played back through a VCR.	• This Recorder is compatible with the copy guard of analogue copy protect system. Some discs contain a copy prohibiting signal. If you try to playback such a disc through a VCR, or record to a VCR and playback, copy guard will prevent normal playback.
TV operates incorrectly.	• Some TVs with wireless remote control capability may operate incorrectly when using the remote control of this Recorder. Use such TV away from this Recorder.
Recording stops.	• Recording may stop temporarily at parts where recording is impossible (due to scratches or disc fouling, etc.). When recording starts again, the starting part will be recorded as another title. If the disc is in a condition where recording is impossible, it is ejected. • When the recording is interrupted, you might lose a few minutes of the recorded content immediately before the interrupted point.
You recorded, but nothing was recorded on disc.	• If you record a channel with no broadcast (i.e. where the broadcast has ended), recording will be done with no video. Likewise, if you record a channel with poor reception, recording may be done with no video. • Clean the disc.
Cannot record, or recording stops while in progress.	• Check whether there is enough empty space on the disc being recorded to. • Check whether the disc is protected. • Check whether the number of original titles is 199 (for the HDD) or 99 (for a DVD-RW/R). • Check whether you are trying to record video whose recording is prohibited. • Check whether there was a power failure while waiting for (or during) timer recording. • Clean the disc. • Proper playback may be impossible due to a scratched, warped or dirty disc, the state of the pick-up, or compatibility issues between this Recorder and the disc being used.
When a digital camcorder is connected to the DV IN terminal, video from the camcorder does not appear, or there is no sound, or the system operates incorrectly.	• Check connections. • Turn off the power of both the Recorder and camcorder once, and then turn it on again. • Reconnect DV cable. • Try setting "DV LINK" to "OFF" using "DV SETTING" screen.(Page **90**) • Switch input audio using "DV SETTING" screen.(Page **90**)
Cannot operate the digital camcorder connected to the DV IN terminal.	• Set "DV LINK" to "ON" using "DV SETTING" screen. You can operate using the On-screen Control Panel. • Operation may be impossible, depending on the connected camcorder.
There is no video and no audio.	• Is the power cord unplugged from the AC outlet? • Is power in the "OFF" state? • Does the broadcast have no video or audio? • Has the Recorder been switched to external input?
There is just audio with no video.	• Is the connection cable for video output connected properly?
Horizontally wide video appears vertically tall, or black bands appear at the top and bottom of the screen.	• Is "TV MODE" set to match the connected TV? (Page **88**) • If you are using a wide TV, is the "TV MODE" set to "WIDE"? (Page **88**)
Square noise (mosaic) appears on the screen.	• Pictures in blocks may be conspicuous in scenes with rapid movement due to the characteristics of digital image compression technology.
Video stops.	• Has the Recorder been subjected to shock or impact? Are you using it at an unstable location? The Recorder will stop if it senses shock or vibration. • The picture may be disturbed in very rare cases due to the characteristics of the HDD. This is not a malfunction.
Left and right channels of audio are reversed, or sound comes out of only one side.	• Are left and right audio cables connected to the opposite terminal, or is one side disconnected?
DVD disc does not play back automatically.	• Has HDD been selected instead of DVD? Playback will start automatically by switching to DVD. • Have you set a DVD video disc that has an automatic playback function?

Problem	Suggested Solution
Timer recording was set, but not executed.	• Was there a power failure while standing by for timer recording? • Is the HDD or DVD full? Erase unnecessary titles from the list. • Were you performing dubbing? • If you use the Recorder at a location with low temperature, the HDD may enter the preparation state. Set and leave power "ON" for a while before timer recording is performed. • Is the power cord unplugged from the AC outlet?
The timer recorded content stops in the middle of recording.	• Was the power plug unplugged, or was there a power failure, during timer recording? • Is the HDD or DVD full? Erase unnecessary titles from the list. • Recording will stop if a programme whose recording is forbidden begins in the middle of recording. • Clean the disc. • If there is a power failure or other power problem during recording to DVD-RW/R, recording will stop in the middle. If there is a power failure or other power problem during recording to HDD, that program will be lost.
The REC LIST (THUMBNAIL or TITLE LIST) is not displayed.	• The REC LIST cannot be displayed during Time Shift Viewing or Chasing Playback. Press the ■**STOP/LIVE** button, and return to live viewing. • If you use the Recorder at a location with low temperature, the HDD may enter the preparation state. Please wait a while. • There may be a problem with the HDD. Contact the nearest service centre approved by Sharp.
When a CD is recorded to MD using digital connection, the CD and MD do not have the same track numbers.	• If the interval between CD tracks is short, the track numbers on the recorded MD may differ from the CD.
The Recorder makes a sound even when there is no operation.	• If you do not operate the Recorder for a certain time while power is ON, you will hear the sound of the HDD operating. This is not a malfunction.
The Recorder heats up during use.	• When using this Recorder, the console cabinet may heat up, depending on the use environment. This is not a malfunction.
The Recorder makes a snapping sound when starting recording, playback or loading a disc.	• The Recorder may sometimes make a snapping sound when starting recording or playback if you have not operated it for a while or when loading a disc. This is the sound of the Recorder operating, and is not a malfunction.
A blinking "----" appears on the front display panel.	• The clock has not been set. Set the clock.

🗋 NOTE

• If this Recorder receives strong interference from strong external noise such as excessive static electricity, malfunction of power supply voltage caused by lightning during Recorder use or a wrong operation is sent to the Recorder, errors like the Recorder not accepting an operation may occur.
• Press **RESET** with a toothpick or other narrow rod-like object (nonmetal) when the Recorder does not operate properly even after the power has been turned off and then back on again.
• Since the clock, channel, timer recording programmes and other data in memory are also reset when **RESET** has been pressed, they must be set again.
• When the problem persists even after pressing **RESET**, unplug the power cord and plug it again. If this does not solve the problem, contact the nearest service centre approved by Sharp.

RESET button
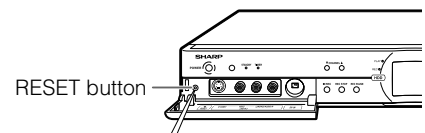
On-screen Error Messages

Messages Relating to DVD Discs and the HDD

- The following messages appear on the TV screen in case the disc you tried to playback is not appropriate or the operation is not correct.

Error message	Possible Error	Suggested Solution
CANNOT PLAY BACK THIS DISC.	• The disc cannot be played back with this Recorder.	• Check the disc, and load it correctly.
THIS IS A NON-STANDARD DISC.	• If you load a disc which cannot be played with this Recorder (i.e. a scratched disc), or if you load a disc upside down, this message will appear, and the disc tray will automatically pop out.	
REGION CODE OF DISC IS WRONG.	• Occurs if you load a DVD disc whose region number is not "ALL" or whose region number does not contain "2".	
DISC IS NOT INSERTED.	• Occurs if no disc is loaded in the disc tray.	
CANNOT OPERATE THIS FUNCTION.	• Occurs if operation is incorrect.	————
DISC IS PROTECTED.	• Occurs if you attempt to record or edit a disc for which disc protection is set. • Occurs if you attempt DV input of video which cannot be recorded, and attempt to record to a DVD.	• Cancel disc protection, or reload a recordable disc.
COULD NOT REPAIR THE DISC.	• If there is a power failure during DVD recording, the system automatically tries to recover data after power is restored. This error occurs if such recovery is impossible.	————
COULD NOT FINALIZE.	• Occurs if the disc is scratched or dirty, etc.	• Check the disc, and load it correctly.
THIS VIDEO IS COPY PROTECTED. RECORDING IS NOT POSSIBLE.	• Occurs if video with a copy guard signal is input.	• Cannot record.
CANNOT RECORD MORE.	• Occurs if a title or chapter mark exceeds the recordable upper limit. • Number of titles: HDD 199/DVD 99. Number of chapters: HDD 999/DVD 999	• Erase unnecessary titles. • Either erase unnecessary chapters, or combine chapters.
CANNOT RECORD ON THIS DISC.	• Occurs if you load a disc which cannot be recorded to with this Recorder, or a disc which is scratched or dirty.	• Reload an appropriate recording disc.
NO TAPE INSERTED IN DV CAMCORDER.	• Occurs if you attempt operation when a tape has not been loaded in the digital camcorder linked via DV connection.	• Load a tape into the digital camcorder.
CONNECTING TO DV CAMCORDER.	• Occurs if the digital camcorder power goes off or the cable is pulled out while connecting to DV.	• Check the power of digital camcorder or cable connection.
	• Occurs if connection with the digital camcorder is broken.	• System is performing reconnection processing. Wait about 30 seconds.
COULD NOT INITIALIZE.	• Occurs if the disc is scratched or dirty, etc.	• Check the disc, and load it correctly.
DISC IS FULL. CANNOT RECORD OR STORE.	• Occurs if there is no empty space in the disc.	• Load a disc with empty space. • Erase unnecessary titles.
THIS VIDEO CANNOT BE RECORDED TO THIS DISC.	• Occurs if you try to record a "Copy Once" broadcast onto a disc which is not compatible with CPRM.	• Load a CPRM compatible disc (DVD-RW Ver. 1.1 or higher) initialized in VR mode.
CAN'T DETECT CAMCORDER.	• Occurs if you set to DV input without connecting a digital camcorder. • Occurs if multiple digital camcorders are connected.	• Connect a digital camcorder, and reset again to DV input.
SET THE DATE AND TIME.	• Occurs if timer programming is done when the Recorder clock has not been set.	• Set the clock and perform timer programming again.

Continued on Next Page ▶▶▶

On-screen Error Messages

Error message	Possible Error	Suggested Solution
RECORDING WAS STOPPED DUE TO FULL DISC.	• Occurs when empty space in the disc runs out.	_____
REPAIRING THE DISC.	• Occurs when recording stops before disc information has been correctly written onto a DVD, due to a problem like a power failure.	• Wait until DVD disc recovery is finished.
THIS IS A NON-STANDARD DISC. REMOVE IT.	• Occurs if the loaded disc cannot be recorded to or played because it is a non-standard or scratched, etc.	• Remove the disc.
THIS VIDEO CANNOT BE RECORDED TO THIS DISC. TIMER RECORDING COULD NOT START.	• Occurs if you try to record "Copy Once" video onto DVD-R or non-CPRM compatible DVD-RW.	• Record on CPRM compatible DVD-RW disc in VR mode.
LIVE BROADCAST RECORDING PROHIBITED. RECORDING STOPPED.	• Occurs if a programme begins during recording, and recording of the broadcast itself is forbidden due to copyright protection.	_____
THIS VIDEO IS COPY PROTECTED. RECORDING IS NOT POSSIBLE.	• Occurs if you attempt to record a programme, and recording of the broadcast itself is forbidden due to copyright protection.	_____
CANNOT OPERATE DUE TO HDD ERROR. CAN VIEW LIVE BROADCASTS ONLY. CONTACT THE NEAREST SERVICE CENTRE APPROVED BY SHARP.	• Occurs when there is a problem with the HDD, and when you perform an operation which requires HDD operation, like special playback or recording.	• Initialize the HDD once. If initialization does not solve the problem, please contact the nearest service centre approved by Sharp as soon as possible.
SYSTEM ERROR. POWER IS OFF.	• If a problem occurs with the HDD while power is "ON", power is shut off automatically.	_____
CHECKING HARD DISC. CAN ONLY VIEW LIVE BROADCAST UNTIL CONFIRMATION IS OVER.	• Occurs if there is a power failure, or the power cord is unplugged and plugged in again while power is "ON".	• It may take 1-2 minutes to check the HDD. During this time, you can only watch live broadcasts. Wait a while until the check is over.
THIS PROGRAM COPY IS PRO-TECTED. CANNOT VIEW TIME SHIFT.	• Occurs if time shift viewing is impossible because recording of the broadcast itself is forbidden by copyright protection.	• You can only view live broadcasts.

Messages during Special Playback

Error message	Possible Error	Suggested Solution
CANNOT OPERATE DUE TO THE CONDITION OF HARD DISC.	• Occurs if you perform operation like special playback when there is problem with the HDD.	• The HDD must be repaired, so contact the nearest service centre approved by Sharp as soon as possible.
HARD DISC IS NOT READY YET. CANNOT OPERATE.	• Occurs if you perform operation requiring operation of the HDD (like special playback or recording) during HDD preparation.	• You can only view live broadcasts until preparation is finished. Wait a while until operation is enabled. (If you use the Recorder at a cold location and the HDD temperature is low, HDD preparation may take some time.)

Messages during Dubbing

Error message	Possible Error	Suggested Solution
CANNOT SELECT MORE.	• Occurs if you attempt to select 6 titles (chapters) at the screen for selecting titles or chapters to be dubbed.	• Dub 5 titles (or chapters) at a time.

On-screen Error Messages

Messages during Dubbing

Error message	Possible Error	Suggested Solution
CANNOT HIGH SPEED DUB THIS TITLE.	• Occurs if you attempt high-speed dubbing onto DVD in Video mode of a title for which "High Speed Dubbing Priority" has not been set, or if you attempt high speed dubbing of a title edited in frame units on the HDD.	• Perform "Rate Conversion Dubbing".
TITLE PROTECTION IS SET. CANCEL TITLE PROTECTION BEFORE DUBBING.	• Occurs when you attempt to dub a title containing a "Copy Once" part for which title protection has been set.	• If a title contains a "Copy Once" part, you can only move the original. If title protection is set for a title, you cannot move it, so perform dubbing (movement) after cancelling title protection.
CANNOT DUB TO DISC DUE TO COPY PROTECTED PROGRAM.	• Occurs if you attempt to dub a title containing a "Copy Once" part to DVD-R or a non-CPRM compatible DVD-RW.	• Dub in VR mode to a CPRM-compatible DVD-RW.
CANNOT DUB TO THE DISC.	• Occurs if an unrecordable disc is loaded (i.e. when the maximum number of titles or chapters is exceeded, when the disc is protected, when the disc is scratched or dirty, or when the disc is a ROM disc).	• Replace with a recordable disc.
CANNOT DUB FROM THE DISC.	• Occurs when a disc other than a DVD-RW/R is loaded.	• Dub from a DVD-RW/R disc.
COPY PROTECTED PROGRAM WILL BE MOVED.	• Occurs if you attempt to dub a title containing a "Copy Once" part.	• Be careful because the dubbing source video is erased after dubbing.

Messages during Editing

Error message	Possible Error	Suggested Solution
CANNOT SELECT MORE.	• Occurs if you attempt to select more than 20 titles (chapters) when you perform Erase Selected Title.	• Erase a maximum of 20 titles (chapters) at a time.
CANNOT SET THIS POSITION.	• Occurs if you attempt to designate a range shorter than 3 seconds and edit.	• Designate a range of 3 seconds or more. (If you designate a range of 3 seconds or more, you can designate in frame units.)
CHAPTER IS FULL. CANNOT OPERATE THIS FUNCTION.	• Occurs if the editing result exceeds the upper limit of total number of chapters (999).	• Edit after erasing unnecessary chapter marks by combining chapters.
CANNOT COMBINE THESE CHAPTERS.	• Occurs if you attempt to combine chapters which cannot be combined. (Chapters created when you erase a scene or chapter in a single title cannot be erased).	————————

Glossary

Alternate Recording	If you set to Exact Recording but the timer recording programme will not fit into a single DVD-RW/R, the Recorder will automatically perform Alternate Recording to HDD. The Recorder will also perform Alternate Recording to HDD if you forget to load a DVD-RW/R.
Angle	Recorded onto some DVD discs are scenes which have been simultaneously shot from a number of different angles (the same scene is shot from the front, from the left side, from the right side, etc.). With such discs, you can select the angle on Function Control Screen to view the scene from different angles.
Chapter Number	These numbers are recorded on DVD discs. A title is subdivided into many sections, each of which is numbered, and specific parts of video presentations can be searched quickly using these numbers.
Chasing Play-back	This function lets you playback and view a programme while it is being recorded onto HDD.
Copy Guard	This function prevents copying. You cannot record software or broadcast programmes marked by the copyright holder with a signal which limits copying.
Digital Gamma	Corrects for gradations in dark areas of images to make images clearer.
Digital Super Picture	Enhances the fine detail of the image and outlines of the objects it contains.
Disc Menu	This lets you select things like the subtitle language or overdub audio using a menu stored on the DVD video disc.
Dolby Digital	A sound system developed by Dolby Laboratories Inc. that gives movie theatre ambience to audio output when the product is connected to a Dolby Digital processor or amplifier.
Dolby Digital Output Level	Setting that increases the average volume of Dolby Digital audio when playing a DVD.
Dolby Virtual Surround	This lets you enjoy Surround audio via analogue connection with a stereo (2ch) TV or audio equipment.
DTS	This is a digital sound system developed by Digital Theater Systems for use in cinemas. This system uses 6 audio channels and provides accurate sound field positioning and realistic acoustics. (By connecting a DTS Digital Surround decoder, you can also listen to DTS Digital Surround sound.)
Exact Dubbing	This function is used when dubbing from HDD to DVD. It automatically selects the recording mode according to the recording time of the title so that the recording will fit into a single disc.
Exact Record-ing	This function automatically changes the recording mode to prevent recordings from running out before they are finished due to a lack of available DVD disc space by comparing the available disc space and the time required for the timer recording.

Glossary

Finalization
This is done to enable playback of discs (Video mode) recorded with this Recorder using other DVD-RW and DVD-R compatible DVD players. (We do not guarantee that playback will be possible with all DVD players.)
The DVD players which can play back VR mode discs are those with an "**RW**_{COMPATIBLE}" indication.

High Speed Dubbing Priority
This function lets you perform high speed dubbing to a DVD even in Video mode after recording, by setting High Speed Dubbing Priority to "YES" when recording to HDD.

Initialization
This allows you to use the HDD or a DVD-RW disc in this Recorder. If you initialize a disc, all of the programmes recorded on it are erased.

Letter Box
4:3 LB
Screen size that cuts off the top and bottom of the image to allow playing of wide-screen (16:9) software on a connected 4:3 TV.

Linear PCM Sound
Linear PCM is a signal recording format used for Audio CDs.
The sound on Audio CDs is recorded at 44.1 kHz with 16 bits. (On DVD discs, sound is recorded at between 48 kHz with 16 bits and 96 kHz with 24 bits.)

MP3
One type of audio compression that uses MPEG1. This format compresses sound to about 1/10, without impairing the original sound quality.

Multi Angle
This is a feature of DVD video discs. In some discs, the same picture is shot from different angles, and these are stored in a single disc so you can enjoy playback from different angles. (This function can be enjoyed if the disc is recorded with multiple angles.)

Multi Audio
This is a feature of DVD video discs. This function makes it possible to record multiple different audio tracks for the same video, so you can enhance your enjoyment by switching audio. (You can enjoy this function with discs recorded with multiple audio tracks.)

Original
A video (title) recorded from a TV broadcast or external input is called an "Original".

Pan Scan
4:3 PS
Screen size that cuts off the sides of the image to allow playing of wide-screen (16:9) software on a connected 4:3 TV.

Parental Control
In some digital broadcasts and DVD video discs, a control level for disc viewing is set depending on the age of the viewer. With this Recorder, you can set the control level for viewing such broadcasts and discs.

Play List
A set of titles created by copying just the needed scenes from original titles is called a "Play List". (The original titles remain as are.)

Playback Control (PBC)
This information is recorded on video CDs (version 2.0). This allows you to actively select the sections to be viewed or listened to, using a menu displayed on the TV.

Rate Conversion Dubbing
This function is used to select the picture quality of dubbed titles at the time of dubbing.

REC LIST
This is a list screen which lets you check the recorded programmes (titles) in list form. You can select either Thumbnail or Title List as the REC LIST.

Region Number
Number identifying a geographic region of compatibility for a DVD.

Remote Control Code	This is the type of the remote control signal for operating the recorder. There are two types of remote control signal: "Remote Control No. 1" (RC-1) and "Remote Control No. 2" (RC-2).
Resume Playback	If you stop playback while it is in progress, the Recorder stores the stop position in memory, and this function lets you playback from that stopping point.
Simultaneous Recording/ Playback	This function lets you play back and view already recorded programmes while you are recording. (However, you cannot play back from a DVD while recording to the DVD.)
Skip	This returns to the start of the chapter (or track) being played, or skips to the next chapter.(or track)
Subtitles	These are the printed lines appearing at the bottom of the screen which translate or transcribe the dialog. They are recorded on DVD discs.
Time Number	This indicates the play time which has elapsed from the start of a disc or a title. It can be used to find a specific scene quickly. (It may not work with some discs.)
Time Shift	This Recorder is designed so you can automatically record the programme being viewed to the HDD by pressing the TIME SHIFT button. The automatically recorded programme can be viewed using other types of playback.
Title Menu	In a DVD video disc, this is the menu for selecting things like the chapter to be played back and the subtitle language. In some DVD video discs, the title menu may be called the "Top Menu".
Title Number	These numbers are recorded on DVD discs. When a disc contains two or more movies, these movies are numbered as title 1, title 2, etc.
Track Number	These numbers are assigned to the tracks which are recorded on video CDs and Audio CDs. They enable specific tracks to be located quickly.
VBR Control	VBR is the abbreviation for Variable Bit Rate control. This feature performs control by varying the bit rate (the amount of code transferred in a fixed period of time) by assigning a larger amount of code to complex video images such as sections containing rapid movement or sections containing sudden changes in colour, and assigning a smaller amount of code in the opposite cases.
Video Mode	This is a recording format for making DVD-RW/R discs playable with other commercially available DVD players. (We do not guarantee that playback will be possible with all DVD players.)
VR Mode	This recording format is the basic DVD-RW recording format, and lets you enjoy the various editing functions available with this Recorder.

Specifications

General

HDD capacity: .... 120 GB (DV-HR350F),
80 GB (DV-HR300F)

Power supply: .... AC 220-240 V, 50 Hz

Power consumption
(Normal): .... 36 W

Power consumption
(Standby): .... 1 W max. (While the Front Panel
Display is off)

Dimensions: .... Approx. 430 mm × 59 mm × 323
mm (W × H × D)

Weight: .... Approx. 5.1 kg

Operating temperature .... 5°C to 35°C

Storage temperature: .... –20°C to 55°C

Operating humidity: .... 10% to 80% (no condensation)

TV systems: .... PAL system, 625 lines, 50 fields

Recording

Recordable disc media: .... DVD-RW, DVD-R

Recording system (HDD): .... Video: MPEG
Audio: MPEG (2ch)/Linear PCM
(FINE/MN32 mode only)

Recording system (DVD-RW/R): ..... Video: DVD-Video Recording
(VR mode)
DVD-VIDEO (Video mode)
Audio: MPEG (2ch)/Linear PCM
(FINE/MN32 mode only)

Recording time (Hard disc): .... FINE (High picture quality):
Approx. 30 hours (DV-HR350F)
Approx. 20 hours (DV-HR300F)
SP (Standard):
Approx. 50 hours (DV-HR350F)
Approx. 33 hours (DV-HR300F)
LP (2X):
Approx. 100 hours (DV-HR350F)
Approx. 67 hours (DV-HR300F)
EP (3X):
Approx. 150 hours (DV-HR350F)
Approx. 100 hours (DV-HR300F)
MN (Manual): 32 levels between
FINE and EP
(However, the maximum
continuous recording time is 12
hours.)

Recording time
(With 4.7GB DVD-RW/R): .... FINE (High picture quality):
Approx. 1 hour
SP (Standard): Approx. 2 hours
LP (2X): Approx. 4 hours
EP (3X): Approx. 6 hours
MN (Manual): 32 levels between
FINE and EP

Playback

Playable discs: .... DVD Video, DVD-RW/R,
DVD+RW/R, Audio CD (CD-DA),
Video CD, CD-RW/R (CD-DA,
Video CD format, MP3 file
format)

Tuner

Channel coverage: .... PAL-B/G: VHF 2–12
UHF 21–69
CATV S1–S41
SECAM-L: VHF 2–12
UHF 21–69
CATV B–Q

Timer

Programmes: .... 16 programmes/1 year

Clock: .... Quartz lock
(24-hour digital display)

Memory backup: .... Approx. 1 hour

Input/Output

VHF/UHF antenna input/
output terminal: .... 75Ω (F-shape connector)

Video input: .... LINE 1, LINE 2 (rear), 3 (front)
Input level: .... 1 Vp-p (75Ω)
SCARTs: .... 21 pin
Jack: .... RCA-pin jack

Video output:
Output level: .... 1 Vp-p (75Ω)
SCARTs: .... 21 pin
Jack: .... RCA-pin jack

S-Video input: .... LINE 1, LINE 2 (rear), 3 (front)
Y-Input level: .... 1 Vp-p (75Ω)
C-Input level: .... 0.3 Vp-p (75Ω)
SCARTs: .... 21 pin
Jack: .... 4 pin mini DIN

S-Video output:
Y-Output level: .... 1 Vp-p (75Ω)
C-Output level: .... 0.3 Vp-p (75Ω)
SCART (only LINE 1): .... 21 pin
Jack: .... 4 pin mini DIN

Component video output:
Output level: .... Y: 1 Vp-p (75Ω)
C_B, C_R: 0.7 Vp-p (75Ω)
Jacks: .... RCA jack

Audio input: .... Input 1, 2 (rear), 3 (front) L/R
Input level: .... 2 V rms (Input impedance: more
than 22 kΩ)
Jacks: .... RCA jack

Audio output: .... L/R
Output level: .... 2 V rms (Output impedance:
less than 1.5 kΩ)
Jacks: .... RCA jack

Digital audio optical output:
Terminal: .... Square Optical terminal

Digital audio coaxial output:
Jack: .... RCA jack

DV input:
Terminal: .... 4 pin (i.LINK/IEEE 1394
standard)

LASER Specification

Wave length: .... DVD: 658 nm
CD: 784 nm

Laser power: .... DVD: 100 mW
CD: 225 mW

Specifications are subject to change without notice.

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