SAMSUNG

Instruction Manual

DVD-VR345

DVD+ReWritable
DVD+R

DVD
RAM/RW/R

DVD
VIDEO

VHS
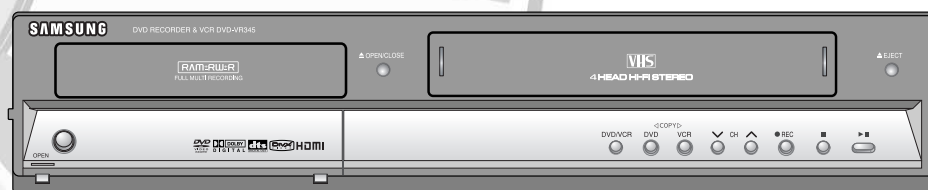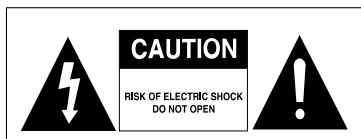
Hi-Fi

Warning

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

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

This symbol indicates "dangerous voltage" inside the product that presents a risk of electric shock or personal injury.

This symbol indicates important instructions accompanying the product.

Do not install this equipment in a confined space such as a bookcase or similar unit.

WARNING : To prevent damage which may result in fire or electric shock hazard, do not expose this appliance to rain or moisture.

CAUTION : This DVD Recorder & VCR USES AN INVISIBLE LASER BEAM WHICH CAN CAUSE HAZARDOUS RADIATION EXPOSURE IF DIRECTED.
BE SURE TO OPERATE RECORDER CORRECTLY AS INSTRUCTED.

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

CAUTIONS
Caution: To prevent electric shock, match wide blade of plug to wide slot, fully insert.
Attention: Pour éviter les chocs électriques, introduíre la lame la plus large de la fiche dans la borne correspondante de la prise et pousser jusqu au fond.
This product satisfies FCC regulations when shielded cables and connectors are used to connect the unit to other equipment. To prevent electromagnetic interference with electric appliances, such as radios and televisions, use shielded cables and connectors for connections.

FCC NOTE (for U.S.A):
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to

2 - English

Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment and receiver.
• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
• Consult the dealer or an experienced radio/TV technician for help.

Caution: FCC regulations state that any unauthorized changes or modifications to this equipment may void the user's authority to operate it.

Note
■ This unit can be used only where the power supply is AC 120V, 60Hz. It cannot be used elsewhere.
■ This DVD Recorder & VCR is designed and manufactured to respond to the Region Management Information.
If the Region number of a DVD disc does not correspond to the Region number of this , the DVD Recorder & VCR cannot play the disc.
■ This device is protected by U.S. Patent Nos.4,631,603;4,577,216;4,819,098;4,907,093; and 6,516,132. This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology must be authorized by Macrovision,and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision. Reverse engineering or disassembly is prohibited.
■ This product is covered by one or more of the following U.S. patents:
5,034,830 5,060,200 5,457,669 5,561,649
5,691,858 5,705,762 5,987,417 6,043,912
6,222,983 6,272,096 6,377,524 6,377,531
6,385,587 6,389,569 6,389,570 6,408,408
6,466,532 6,473,736 6,477,501 6,480,829
6,556,520 6,556,521 6,556,522 6,594,208
6,674,697 6,674,957 6,721,493 6,728,474
6,741,535 09/610381 09/610695

DANGER	– VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.
CAUTION	– VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.
ATTENTION	– RAYONNEMENT LASER VISIBLE ET INVISIBLE EN CAS D'OUVERTURE. EXPOSITION DANGEREUSE AU FAISCEAU.
ADVARSEL	– SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARO !	– AVATTAESSA OLET ALTTIINA NÄKYVÄÄ JA NÄKYMÄTÖN LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING	– SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. BETRAKTA EJ STRÅLEN.
ADVARSEL	– SYNLIG OG USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES. UNNGÅ EKSPONERING FOR STRÅLEN.
VORSICHT	– SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.
注意	– 打开时有可见及不可见激光辐射．避免激光束照射．
注意	– ここを開くと可視及び不可視のレーザー光が出ます。 ビームを直接見たり、触れたりしないでください。

Precaution

▌ Important Safety Instructions

Read these operating instructions carefully before using the unit. Follow all the safety instructions listed below. Keep these operating instructions handy for future reference.

1) Read these instructions.
2) Keep these instructions.
3) Heed all warnings.
4) Follow all instructions.
5) Do not use this apparatus near water.
6) Clean only with dry cloth.
7) Do not block any ventilation openings, Install in accordance with the manufacturer's instructions.
8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9) Do not defeat the safety purpose of the polarized or grounding- type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. if the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11) Only use attachments/accessories specified by the manufacturer.
12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13) Unplug this apparatus during lightning storms or when unused for long periods of time.
14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

▌ Handling Cautions

• Before connecting other components to this recorder, be sure to turn them all off.
• Do not move the recorder while a disc is being played, or the disc may be scratched or broken, and the recorder's internal parts may be damaged.
• Do not put a flower vase filled with water or any small metal objects on the recorder.
• Be careful not to put your hand into the disc tray.
• Do not place anything other than the disc in the disc tray.

• Exterior interference such as lightning and static electricity can affect normal operation of this recorder. If this occurs, turn the DVD Recorder & VCR off and on again with the **POWER** button, or disconnect and then reconnect the AC power cord to the AC power outlet. The recorder will operate normally.
• Be sure to remove the disc and turn off the recorder after use.
• Disconnect the AC power cord from the AC outlet when you don't intend to use the recorder for long periods of time.
• Clean the disc by wiping in a straight line from the inside to the outside of the disc.
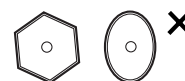
▌ Maintenance of Cabinet

For safety reasons, be sure to disconnect the AC power cord from the AC outlet.
• Do not use benzene, thinner, or other solvents for cleaning.
• Wipe the cabinet with a soft cloth.

▌ Disc Handling

• Use discs with regular shapes. If an irregular disc (a disc with a special shape) is used, this DVD Recorder & VCR may be damaged.

Holding discs

• Avoid touching the surface of a disc where recording is performed.

DVD-RAM, DVD±RW and DVD±R

• Clean with an optional DVD-RAM/PD disc cleaner.
Do not use cleaners or cloths for CDs to clean DVD-RAM/DVD±RW/DVD±R discs.

DVD-Video, CD

• Wipe off dirt or contamination on the disc with a soft cloth.

Cautions on handling discs

• Do not write on the printed side with a ball-point pen or pencil.

• Do not use record cleaning sprays or antistatic. Also, do not use volatile chemicals, such as benzene or thinner.

• Do not apply labels or stickers to discs. (Do not use discs fixed with exposed tape adhesive or leftover peeled-off stickers.)

English **- 3**

- Do not use scratch-proof protectors or covers.
- Do not use discs printed with label printers available on the market.
- Do not load warped or cracked discs.

Disc Storage

Be careful not to harm the disc because the data on these discs is highly vulnerable to the environment.
- Do not keep under direct sunlight.
- Keep in a cool ventilated area.
- Store vertically.
- Keep in a clean protection jacket.
- If you move your DVD Recorder & VCR suddenly from a cold place to a warm place, condensation may generate on the operating parts and lens and cause abnormal disc playback. In this case, do not connect the plug to the power outlet and wait for two hours. Then insert the disc and try to play back again. It will work properly when condensation has evaporated.

Disc Specifications

DVD-Video

- A digital versatile disc (DVD) can contain up to 135-minutes of images, 8 audio languages and 32 subtitle languages. It is equipped with MPEG-2 picture compression and Dolby 3D surround, allowing you to enjoy vivid and clear theater quality images in the comfort of your own home.
- When switching from the first layer to the second layer of a double-layered DVD Video disc, there may be momentary distortion in the image and sound. This is not a malfunction of the unit.
- Once a DVD±R/DVD-RW(V) recorded is finalized, it is playable in a standard DVD player.

Audio CD

- An audio disc on which 44.1kHz PCM Audio is recorded.
- Plays CD-DA format audio CD-R and CD-RW discs. This unit may not be able to play some CD-R or CD-RW discs due to the condition of the recording.

CD-R/-RW

MP3 CD-R/-RW

- Only CD-R discs with MP3 files recorded with ISO9660 or JOLIET format can be played back
- Only MP3 files with the "mp3" or "MP3" extension can be used.
- For MP3 files recorded with a VBR(Variable Bit Rates), from 80 Kbps to 320 Kbps, the sound may cut in out.
- Playable bitrate range is from 56Kbps to 320Kbps.
- The unit can handle a maximum of 1000 files and folders.
- DVD-RAM/±RW/±R discs that contain MP3 files can be played back.

JPEG CD-R/-RW

- Only JPEG files with the ".jpg", ".JPG" extension can be used.
- The unit can handle a maximum of 1000 files and folders.
- Maximum size of progressive JPEG is 3M pixels.
- MOTION JPEG is not supported.
- DVD-RAM/±RW/±R discs that contain JPEG files can be played back.

Using MPEG4 disc

- Disc : CD-R/-RW, DVD-RAM, DVD±R/ DVD±RW,
- MPEG4 File with following extensions can be played. : .avi, .divx, .AVI, .DIVX
- MPEG4 Codec format : DivX 3.11 DivX 4.x DivX 5.x
- Available Audio Format : "MP3", "MPEG", "PCM","AC3", "DTS"
- Supported subtitle file formats: .smi, .srt, .sub, .psb,.txt

Using CD-R/-RW

- Use a 700MB(80 minutes) CD-R/-RW disc. If possible, do not use a 800MB(90 minutes) or above disc, as the disc may not play back.
- If the CD-R/-RW disc was not recorded as a closed session, you may experience a delay in the early play-back time, and all recorded files may not play.
- Some CD-R/-RW discs may not be playable with this unit, depending on the device which was used to burn them. For contents recorded on CD-R/-RW media from CDs for your personal use, playability may vary depending on contents and discs.

DVD±R Disc Playback and Recording

- Once a DVD±R recorded is finalized, it is playable in a standard DVD player.
- You can record onto the available space on the disc and perform editing functions such as giving titles to discs and programs and erasing programs before finalizing.
- When programming is erased from a DVD±R, that space does not become available. Once an area on a DVD±R is recorded on, that area is no longer available for recording, whether the recording is erased or not.
- It takes about 30 seconds for the unit to complete recording management information after recording finishes.
- This product optimizes the DVD±R for each recording. Optimizing is carried out when you start recording after inserting the disc or turning on the unit. Recording onto the disc may become impossible if optimizing is carried out too many times.
- Playback may be impossible in some cases due to the condition of recording.
- This unit can play back DVD±R discs recorded and finalized with a Samsung DVD video recorder. It may not be able to play some DVD±R discs depending on the disc and the condition of the recording.

DVD-RW Disc Playback and Recording

• Recording and playback can be performed on DVD-RW discs in both Video and VR Modes.
• Once a DVD-RW recorded in VR Mode or Video mode is finalized, you cannot perform additional recording.
• Once a DVD-RW recorded in Video Mode is finalized, it becomes DVD-Video.
• In both modes, playback can be performed before and after finalization, but additional recording, deleting and editing can not be performed after finalization.
• If you want to record the disc in VR Mode and then record in V Mode, be sure to execute format. Be careful when executing Format because all the recorded data may be lost.
• For an unused disc, a message that asks whether to initialize a disc or not. If you select "Yes", disc will be formatted in VR mode.

• **DVD-RW (VR mode)**
- This is a format that is used for recording data on DVD-RW disc. You can record multiple titles, edit, delete, partial delete, create a playlist, etc.
- A disc that is recorded in this mode may not be played by existing DVD players.

• **DVD-RW (Video mode)**
- This is a format that is used for recording data on a DVD-RW or DVD-R disc. The disc can be played by an existing DVD player once it has been finalized.
- If a disc that has been recorded in Video mode by a different manufacturer's recorder but has not been finalized it cannot be played or additionally be recorded by this recorder.

DVD+RW Disc Playback and Recording

• With DVD+RW discs, there is no difference between DVD-Video format (Video mode) and DVD-Video Recording format (VR mode).
• You can make your own chapters on DVD+RWs and edit them using the Chapter Edit menu.
• Finalizing is generally unnecessary when using a DVD+RW disc.

DVD-RAM Disc Playback and Recording

• For cartridge type DVD-RAM discs, remove the cartridge and use the disc only.
• Ensure that the recording mode is set to VR mode. Otherwise, this product will not be able to play the recording.
• You cannot play a DVD-RAM in most DVD players due to compatibility issues.
• Only DVD-RAM standard Version 2.0 discs can be played in this unit.
• DVD-RAM recorded on this unit may not work with other DVD Players. To determine compatibility with these DVD-RAM discs, refer to the user's manual for the player.

COPY PROTECTION

• Many DVD discs are encoded with copy protection. Because of this, you should only connect your DVD Recorder & VCR directly to your TV, not to a VCR. Connecting to a VCR results in a distorted picture from copy-protected DVD discs.
• This product incorporates copyright protection technology that is protected by methods claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

Protection

• Program-protection: See page 79 "Locking a Title"
• Disc-protection: See page 92 "Disc Protection"

❋ DVD-RAM/DVD±RW/DVD±R discs that are incompatible with the DVD-VIDEO format cannot be played with this product.

❋ For more information on DVD recording compatibility, consult your DVD-RAM/DVD±RW/DVD±R manufacturer.

❋ Use of poor quality DVD-RAM/DVD±RW/DVD±R discs may cause following unexpected problems including, without limitation, recording failure, loss of recorded or edited materials or damage to the recorder.

Do not use the following discs!

• LD, CD-G, CD-I, CD-ROM and DVD-ROM discs should not be used in this product.
[Note]
• Some commercial discs and DVD discs purchased outside your region may not be playable with this product. When these discs are played, either "No Disc" or "The disc cannot be played. Please check the regional code of the disc." will be displayed.
• If your DVD-RAM/DVD±RW/DVD±R disc is an illegal copy or is not in DVD video format, it may also not be playable.

Disc compatibility

• A 8X speed DVD+RW or greater disc can be played, but maximum recording speed is 4x.
• Not all brands of discs will be compatible with this unit.
• The latest firmware upgrade to improve recording & playback quality can be downloaded from our web site. (Download Center at www.samsung.com)
• If disc compatibility problems continue, or there is an issue upgrading your recorder, contact the Call Center at 1-800-SAMSUNG.

Getting Started

Contents

Getting Started

Connecting & Setting Up

System Setup

Playback

Recording

Editing

Reference

General Features

The DVD-VR345 allows you to record and play high quality digital video on DVD-RAM/DVD±RW/DVD±R discs. You can record and edit digital video on DVD-RAM/DVD±RW/DVD±R discs as if they were VCR tapes.

High quality digital audio and video recording and playback

You can record up to approximately 16-hours of video on a double side 9.4 GB DVD-RAM disc,up to 15-hours on a dual-layer 8.5GB DVD±R disc, and up to 8-hours on a 4.7 GB DVD-RAM/DVD±RW/DVD±R disc, depending on the recording mode.

Creating DVD video titles using DVD±RW/DVD±R discs

With the DVD-VR345, you can create your own DVD video titles on 4.7 GB DVD±RW/DVD±R or 8.5GB DVD±R discs.

A Variety of Recording Options

Select an appropriate recording mode between XP, SP, LP and EP to meet your recording needs. (See page 65.)
• XP mode - High quality, about 1 hour
• SP mode - Standard quality, about 2 hours
• LP mode - Low quality, about 4 hours
• EP mode - Lower quality, about 6 or 8 hours
- The dual layer DVD±Rs have approximately double the capacity of single layer DVD±Rs. (See page 47.)

Copying digital camcorder content using DV input jack

Record digital camcorder images onto DVD-RAM/DVD ±RW/DVD±R discs or video tape using the DV input jack (IEEE 1394-4pin). (See page 66.)

High quality progressive scan

Progressive scanning provides high resolution and flicker free video. The 10-bit 54-MHz DAC, 2D Y/C Separating circuitry and Time Base Corrector processor technology provide you with the highest image playback and recording quality. (See page 20.)
Component progressive scan output video is available in both DVD and VCR modes.

A variety of functions with easy-to-use user interface

Integrated menu system and messaging functionality allow you to perform the desired operations easily and conveniently. With a DVD-RAM/DVD-RW(VR mode) disc, you can edit recorded images, create playlist, and edit video in specific sequence according to your needs.

MPEG4 playback

This DVD Recorder can play MPEG4 formats within an avi file.

DivX Trademark

DivX, DivX Certified, and associated logos are trademarks of DivXNetworks, Inc and are used under license.

HDMI (High Definition Multimedia Interface)

HDMI reduces picture noise by allowing a pure digital video/audio signal path from the DVD Recorder & VCR to your TV.

Before Reading the User's Manual

Make sure to check the following terms before reading the user's manual.

Icons that will be used in manual

Icon	Term	Definition
DVD-VIDEO	DVD	This involves a function available in DVD or DVD-R/DVD-RW(V)/+R discs that have been recorded and finalized.
DVD-RAM	RAM	This involves a function available in DVD-RAM.
DVD-RW	-RW	This involves a function available in DVD-RW.
DVD-R	-R	This involves a function available in DVD-R.
DVD+RW	+RW	This involves a function available in DVD+RW.
DVD+R	+R	This involves a function available in DVD+R.
CD	CD	This involves a function available in a data CD (CD-R or CD-RW).
JPEG	JPEG	This involves a JPEG function available in CD-R/-RW or DVD±R/±RW/-RAM discs.
MP3	MP3	This involves an MP3 function available in CD-R/-RW or DVD±R/±RW/-RAM discs.
MPEG4	MPEG4	This involves an MPEG4 function available in DVD±R/±RW/-RAM discs.
!	Caution	This involves a case where a function does not operate or settings may be cancelled.
	NOTE	This involves tips or instructions on the page that help each function operate.
	One-Touch button	A function that can be operated by using only one button.
ANYKEY	ANYKEY button	A function that can be operated by using ANYKEY button.

About the use of this user's manual

1) Be sure to be familiar with Safety Instructions before using this product. (See pages 2~5)
2) If a problem occurs, check the Troubleshooting. (See pages 98~100)

How to use the DVD Recorder & VCR

Step 1 Select the disc type

This unit can record on the following types of discs. If you want to repeatedly record on the same disc or you want to edit the disc after recording, select a rewritable DVD±RW or DVD-RAM type disc. If you want to save a recording without any changes, choose a non-rewritable DVD±R.

DVD RAM   DVD RW   DVD R   RW DVD+ReWritable   RW DVD+R

Step 2 Format the disc to start recording

Unlike a VCR, the recorder automatically starts formatting when an unused disc is inserted. This is required for the preparation of recording on a disc.

Using a DVD-RAM
This type of disc can be formatted in DVD-Video Recording format (VR mode). You can edit recorded images and create a playlist in a specific sequence according to your requirements.

Using a DVD±RW/+R
• When an unused DVD±RW/+R disc is first inserted, the message "Uninitialized Disc. Do you want to initialize this disc?" will be displayed.
  If you select Yes, initializing will be start. DVD-RW discs can be formatted in either DVD-Video format (Video mode) or DVD-Video Recording format (VR mode)
• With DVD+RW discs, there is no difference between DVD-Video format (Video mode) and DVD-Video Recording format (VR mode).

Using a DVD-R
Initializing disc is unnecessary and only V mode Recording is supported.You can play this type of disc on various DVD components only when they have been finalized.

Note
■ You can only use either the VR or Video mode on a DVD-RW, but not both at the same time.
■ You can format a DVD-RW to V or VR mode using disc manager.
  It should be noted that the disc's data will be lost when changing formats.

Getting Started

Step 3   Recording

There are two different recording methods: Direct Recording and Timer Recording. Timer recording is classified as a Date : Once, Daily or Weekly. Recording mode : XP (high quality mode), SP (standard quality mode), LP (long recording mode), and EP (extended mode).

Step 4   Playing

You can select the title you want to play in a displayed menu and then immediately start playback.
A DVD consists of sections called titles, and sub sections called chapters.
During recording, a title is created between two points where you start and stop recording. Chapters will be created automatically when you finalize recording on DVD-R / DVD-RW discs in Video mode.
You can make your own chapters on DVD+RWs and edit them using the Chapter Edit menu.
The chapter's length (interval between chapters) varies according to the recording mode.

Step 5   Editing a recorded disc

Editing on discs is easier than conventional video tapes. The recorder supports many different edit functions, possible only with DVDs.
With a simple and easy edit menu, you can operate various edit functions, such as delete, copy, rename, lock, etc., on a recorded title.

Creating a playlist (DVD-RAM/-RW in VR mode)

With this recorder, you can create a new playlist on the same disc and edit it without changing the original recording.

Step 6   Finalizing & Playing on other DVD components

To play your DVD on other DVD players, finalizing may be necessary. First, finish all editing and recording operations, then finalize the disc.

When using a DVD-RW disc in VR Mode

Although finalizing is generally unnecessary when playing the disc on a VR Mode compatible component, a finalized disc should be used for playback.

When using a DVD-RW disc in Video Mode

The disc should be finalized first to enable playback on anything other than this recorder. No more editing or recording can be made on the disc once it has been finalized.

When using a DVD±R disc

You should finalize the disc to play it on a component other than this recorder. You cannot edit or record on the disc once it has been finalized.

Description

Front Panel
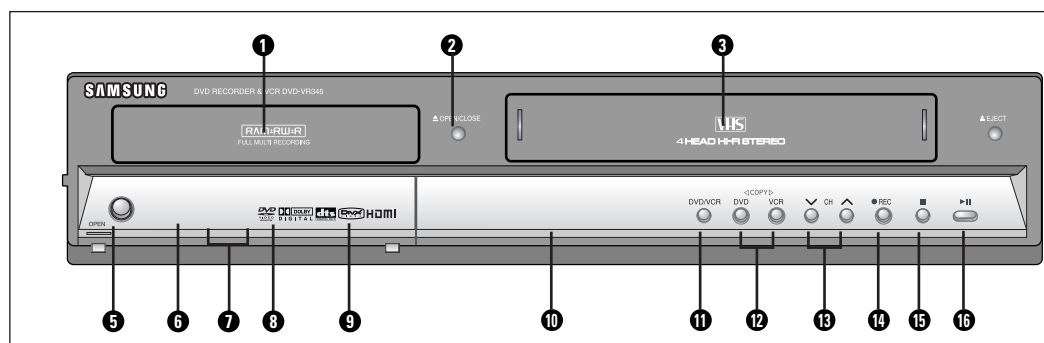
1. DVD DECK	9. P.SCAN BUTTON
2. DVD OPEN/CLOSE BUTTON	10. FRONT PANEL DISPLAY
3. VCR DECK	11. DVD/VCR SELECT BUTTON
4. VCR EJECT BUTTON	12. COPY BUTTON
5. POWER BUTTON	13. CHANNEL ∧ / ∨ BUTTONS
6. VIDEO INPUT JACK (AV 2 IN)	14. RECORD BUTTON
7. AUDIO L, R INPUT JACKS (AV 2 IN)	15. STOP BUTTONS
8. DV INPUT JACK	16. PLAY/STILL BUTTONS

Front Panel Display
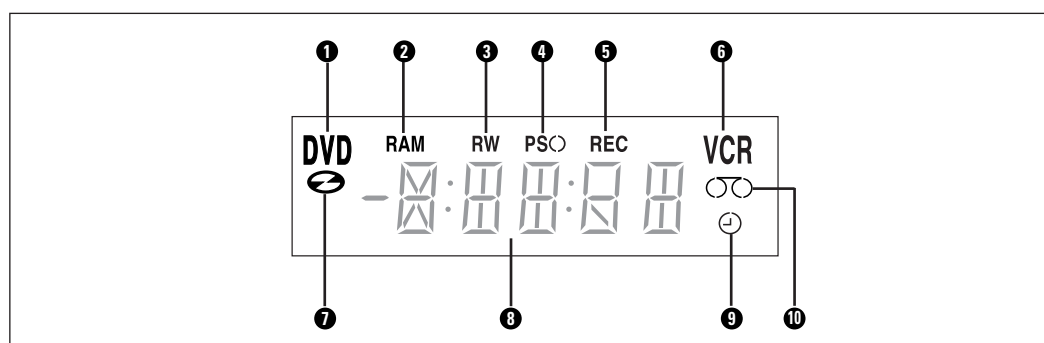
1. DVD is activated.	7. DVD or CD media is loaded.
2. DVD-RAM is activated.	8. The time, counter position or current deck status is indicated.
3. DVD(±)R or DVD(±)RW is actived.	
4. Progressive Scan mode is activated.	9. When you set a Timer recording, this indicator appears.
5. Record function is activated.	
6. VCR is activated.	10. VHS videotape is loaded.

Rear Panel

Fan
The fan always revolves when the power is on.
Ensure a minimum of 4" clear space on all sides of the fan
when installing the product.

1. VIDEO INPUT JACK (AV 1 IN)
2. VIDEO OUT JACK (AV OUT)
3. AUDIO OUT JACKS
   (COMPONENT OUT)
4. S-VIDEO IN/OUT JACKS
5. ANT IN JACK
6. ANT OUT (TO TV) JACK
7. AUDIO INPUT JACKS (AV 1 IN)
8. AUDIO OUT JACKS (AV OUT)
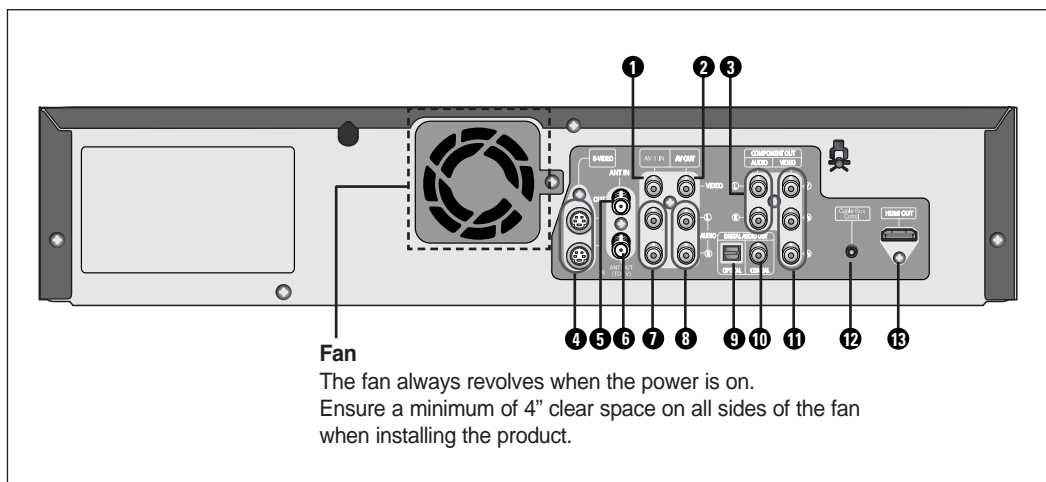
9. DIGITAL AUDIO OUT JACK (OPTICAL)
10. DIGITAL AUDIO OUT JACK (COAXIAL)
11. VIDEO OUT JACKS (COMPONENT OUT)
12. Cable Box Control OUT
    Connection of the IR Blaster for a cable
    box.
13. HDMI OUT
    Connects the input of external equipment
    using an HDMI cable.

Unpacking

Accessories

Check for the supplied accessories below.

Audio/Video Cable (AC39-00073A) — RF Cable for TV (AC39-42001J) — IR Blaster Cable (AC39-00055A) — Remote Control (AK59-00053R) — Batteries for Remote Control (AAA Size) (AC43-12002H) — User's Manual (AK68-00995G) — Quick Guide (AK68-00997F)
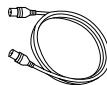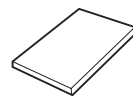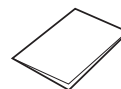
Tour of the Remote Control
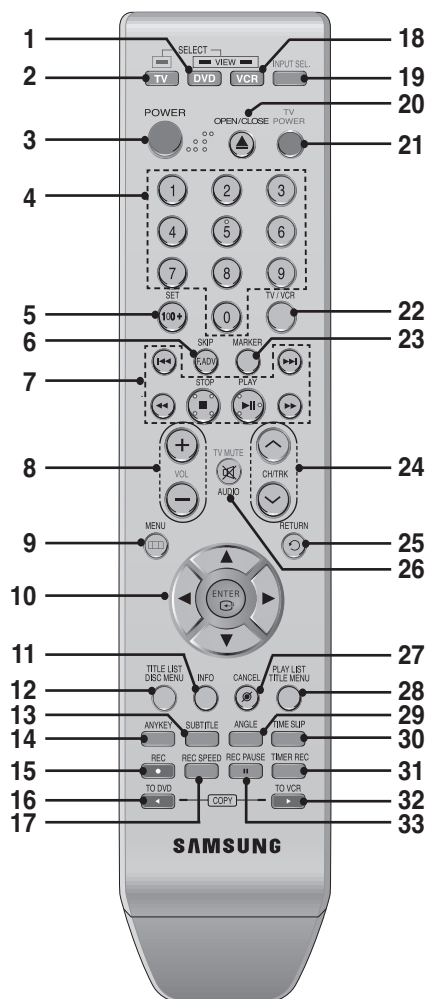
1. DVD Button
Press this when you use a DVD.

2. TV Button
Press this to operate your TV.

3. POWER Button

4. NUMBER Button

5. 100+/SET Button
Press this to select channel 100 or higher.
Press this to change the set top box channels.
(For some set top box brands)

6. F.ADV/SKIP Button

7. Playback-related Buttons
Forward/Rewind, Search, Skip, Stop, Play/Pause

8. VOL (Volume) Button
TV volume adjustment

9. MENU Button
Press this to bring up the DVD Recorder & VCR's
setup menu.

10. ENTER/DIRECTION Buttons
(UP/DOWN or LEFT/RIGHT Buttons)
This button functions as a toggle switch.

11. INFO Button
Press this to display current setting or disc status.

12. TITLE LIST/DISC MENU Button
Press this to enter the TITLE LIST/Disc menu.

13. SUBTITLE Button
Press this to switch the DVD's subtitle language.

14. ANYKEY Button
Press this to set the status of the disc that is being
played.

15. REC Button
Press this to make a recording on VCR, DVD-RAM/
±RW/±R discs.

16. TO DVD COPY Button
Press this when you copy from the VCR to the
DVD.

17. REC SPEED Button
Press this to set the desired recording time and
picture quality.

18. VCR Button
Press this when you use a VCR.

19. INPUT SEL. Button
Press this to select AV input signal in external input
mode. (Tuner, AV input, DV input)

20. OPEN/CLOSE Button
Press this to open and close the disc tray.

21. TV POWER Button

22. TV/VCR Button

23. MARKER Button
Press this to bookmark or mark a position while
playing a disc.

24. CH/TRK Button
Press this to select a TV channel/Adjust tape
tracking.

25. RETURN Button
Returns to a previous menu.

26. AUDIO/TV MUTE Button
Press this to access various audio functions.
This also operates as sound mute. (TV mode)

27. CANCEL Button

28. PLAY LIST/TITLE MENU Button
Press this to enter the Edit playlist/Title menu.

29. ANGLE Button
Press this to access various camera angles on a
disc (if the disc contains multiple camera angles).

30. TIME SLIP Button
(See page 67)

31. TIMER REC Button
Press this when you use Timer Recording.

32. TO VCR COPY Button
Press this when you copy from the DVD to the VCR.

33. REC PAUSE Button
Press this to pause during recording.

❚ **Key Lock Function**
If you do not want others to operate the DVD Recorder &
VCR (for example if you have programmed a timer recording)
you can set the equipment to lock out all button controls.
• Press and hold the **INFO** button on the remote control for 5
seconds.
The display will show "SAFE" when the feature is activated.
• To resume normal mode, press and hold the **INFO** button
again for 5 seconds.
"SAFE" will disappear and the DVD Recorder & VCR will
operate normally.

✳ This is a special remote control for the visually impaired, and has Braille points on the
POWER(●), STOP(⊙) and PLAY(⊙) buttons.

English **- 13**

Getting Started

Connections

Connecting & Setting Up

Quick Overview

A Quick overview presented in this guide will give you enough information to start using the recorder.

Step 1 : Connecting the Antenna Cable

▼

Step 2 : Connecting the Video Cable

▼

Step 3 : Connecting the Audio Cable

▼

Step 4 : Connecting HDMI/ DVI to a TV

▼

Step 5 : Connecting External Devices

▼

Step 6 : Connecting the Power Cord

▼

Step 7 : Preparing the Remote Control

· **Note to CATV system installer :** This reminder is to call CATV system installer's attention to Article 820-40 of the National Electrical Code (Section 54 of Canadian Electrical Code, Part I), that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building as close to the point of cable title as practical.

Step 1: Connecting the Antenna Cable

There are several ways to connect your DVD Recorder & VCR. Select the antenna connection that best suits you below.

Antenna + DVD Recorder & VCR + TV : No Cable box
You can record non-scrambled channels by selecting the channel on the DVD Recorder & VCR. Also use this method if you watch channels without a cable box.
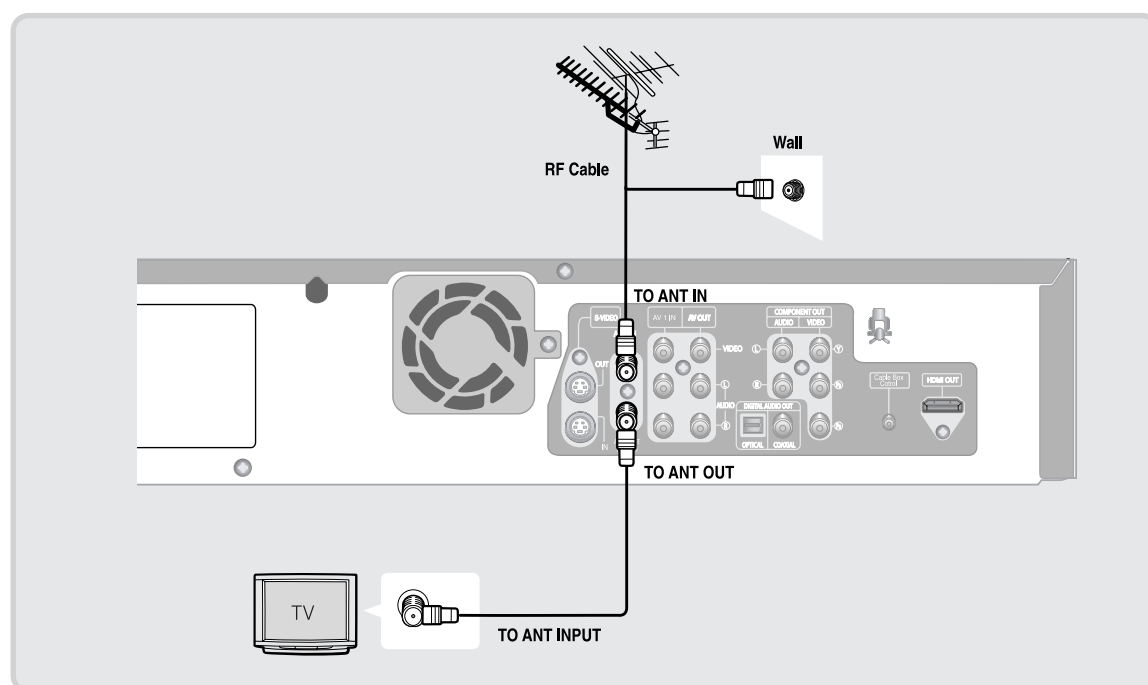
Note ■ If you are using an off-air antenna that has 300-ohm twin flat leads, use an external antenna connector (300-75 ohm adaptor : not supplied) to connect the antenna to the DVD Recorder & VCR.
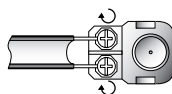
Note ■ If you have two separate antennas (one VHF and the other UHF), use a UHF/VHF combiner-adaptor (available at most electronics shops) to connect the antenna to the DVD Recorder & VCR.

Connections

English **- 15**
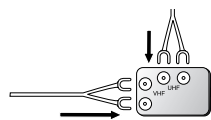
Antenna + Set Top Box Controller + DVD Recorder & VCR + TV : Cable box with a video/audio output or a satellite receiver

You can record channels by selecting the channel on the cable box. You cannot record one channel while watching another channel. Be sure that the cable box is turned on.
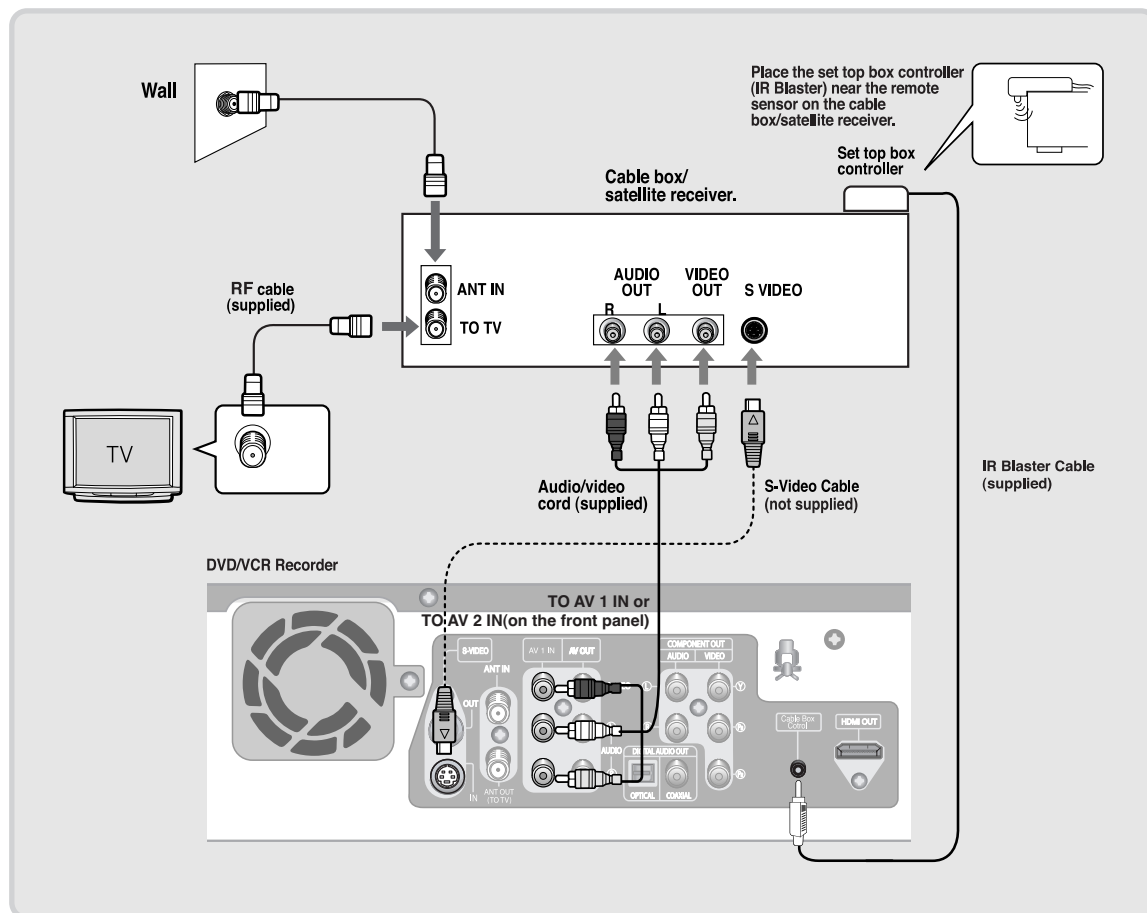
1. Find and Connect the included Cable Box Control (IR Blaster) cable into the Cable Box Control jack of the DVD Recorder.

2. Find the Cable Box IR Sensor
   A. Turn the Cable box Off.
   B. Hold the Cable box's remote so that it touches the front of the Cable Box device (see Figure 1).

   Figure 1

   Correct   Incorrect
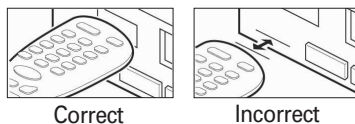
   C. Move the Cable Box's remote across the front of the Cable Box while pressing the remote's power button On and Off (Figure 2).

Figure 2
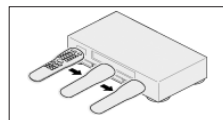
(Press and release the power button each time you move the remote; holding down the button will not work.)
   D. When the cable box powers On, you have found the sensor.
   E. Remember the location of the sensor.

3. Place the IR Blaster cable under or over the cable box, approximately 1 inch in front of the sensor you located in step 2. Use double-sided tape to secure the Set-top box controller (IR Blaster) to the cable box

NOTE
- You must select a cable box brand from the table on pages 101~103.
  If you do not know the brand name, please contact your cable provider.
- After setting up your cable box with the DVD recorder through the IR Blaster cable, you need to set up the Set Top Box Control menu. (See pages 42~43)

16 - English

Antenna + Cable box + DVD Recorder & VCR + TV : Cable box with an antenna output only

You can record non-scrambled channels by selecting the channel on the DVD Recorder & VCR. You cannot record scrambled channels that require a cable box.
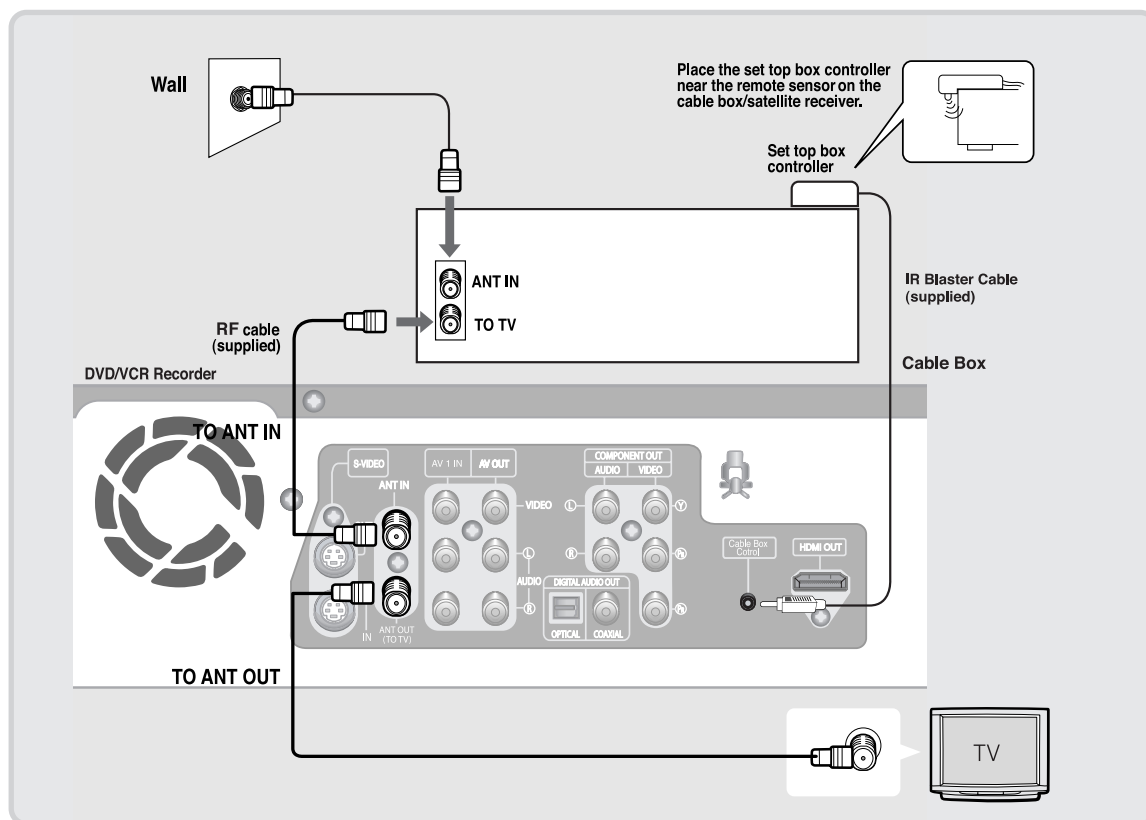
Step 2 : Connecting the Video Cable

There are several ways to connect your DVD Recorder & VCR. Select one of the video connections on the following pages. You must use one of the following audio/video connections on this unit.

Connecting to a Video input jack

Connect a video(yellow) cable between the VIDEO(yellow) OUT jack on DVD Recorder & VCR and VIDEO(yellow) IN jack on the TV.
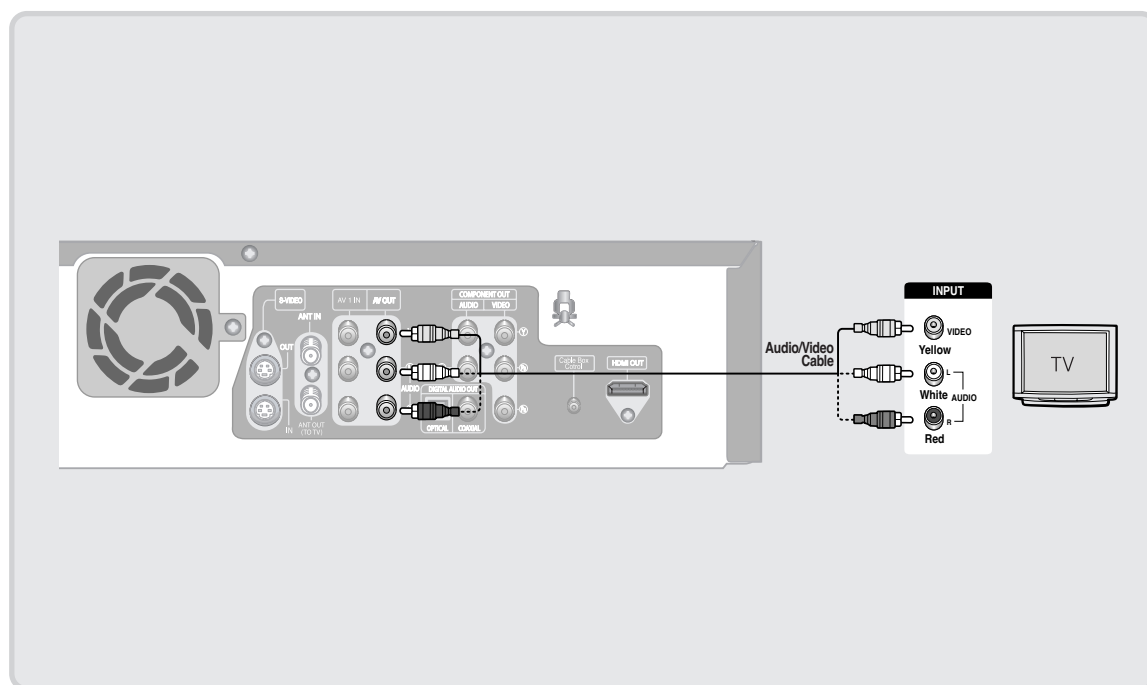
• You will enjoy regular quality images.
• Connect audio cables(white and red) between the
  AUDIO OUT jacks on the DVD Recorder & VCR and
  AUDIO IN jacks on TV(or AV amplifier).
  (See pages 21 ~ 23)

18 - English

Connecting to an S-Video input jack

Connect an S-Video cable(not supplied) between the S-VIDEO OUT jack on DVD Recorder & VCR and S-VIDEO IN jack on your TV.
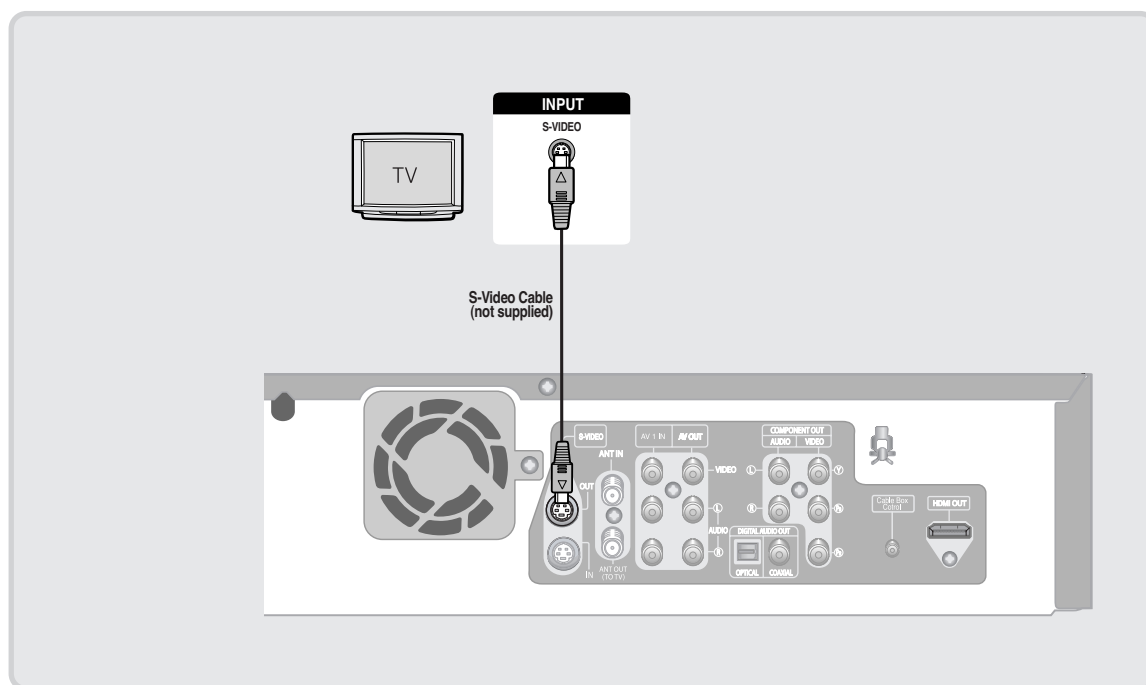
- You will enjoy high quality images. S-Video separates the picture element into black and white (Y) and color (C) signals to present clearer images than regular video input mode.
- Connect audio cables(white and red) between the AUDIO OUT jacks on the DVD Recorder & VCR and AUDIO IN jacks on TV(or AV amplifier). (See pages 21 ~ 23)

Note
■ S-Video and Component video output are available only if your TV supports S-Video input or Component video input, respectively. If S-Video or Component video output does not work, check the TV connections and the TV input selection settings.

English **- 19**

Connecting to Component video input jacks (Y,P$_B$,P$_R$)

Connect Component video cables (not supplied) between the COMPONENT OUT (Y,P$_B$,P$_R$) jacks on DVD Recorder & VCR and COMPONENT IN (Y,P$_B$,P$_R$) jacks on your TV.
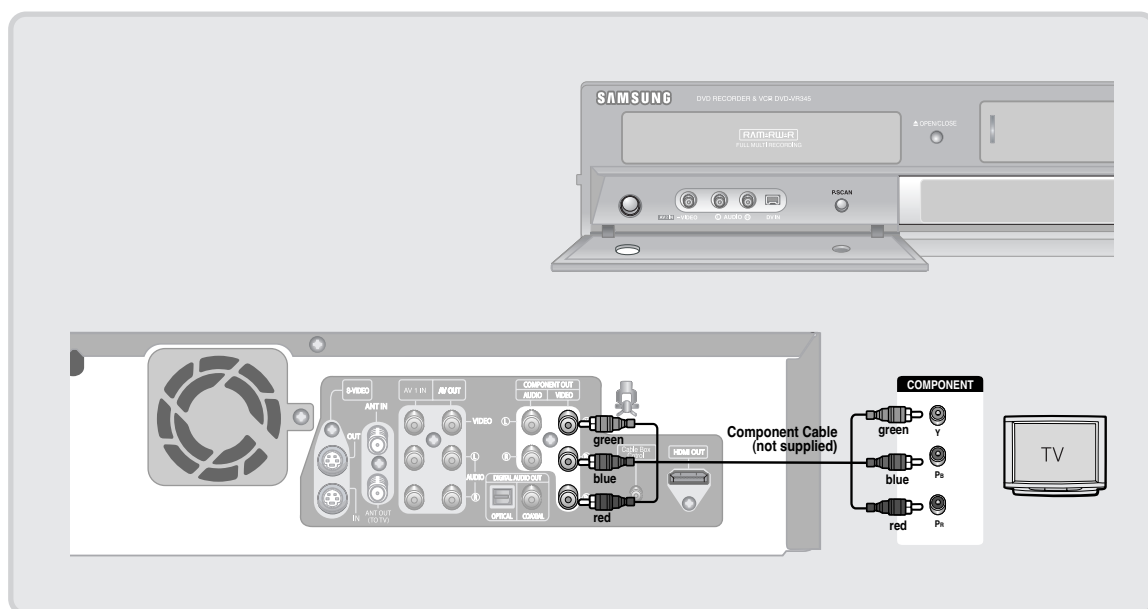
- You will enjoy high quality accurate color reproduction images. Component video separates the picture element into black and White(Y), blue(P$_B$), red(P$_R$) signals to present clear and clean images.

- Connect audio cables(white and red) between the Component AUDIO OUT jacks on the DVD Recorder & VCR and Component AUDIO IN jacks on TV(or AV amplifier). (See pages 21 ~ 23)

- Progressive scan
  - If the your TV supports Progressive Scan, you can enjoy higher quality video by pressing the P.SCAN button. (The component cable has to be connected.)
    1. With the unit in stop mode, press the P.SCAN button on the front of the DVD Recorder & VCR.
    2. The message 'Press "Yes" to confirm Progressive scan mode. Otherwise press "No"' will appear. Press the ◄ ► buttons to select Yes, and then press the ENTER button.

Note

■ Compared to standard interlaced video, progressive scan doubles the amount of video lines fed to your TV, resulting in a more stable, flicker-free, and clear image than interlaced video. The progressive scan video output jack is used in progressive output mode. This is only available with TVs that support progressive scan.

■ Progressive Scan Output (480p)
Consumers should note that not all high definition television sets are fully compatible with this product and may cause artifacts to be displayed in the picture. If you experience 480p progressive scan picture problems, it is recommended that you switch the connection to the 'standard definition' output. If there are questions regarding TV set compatibility with this model, please contact our customer service center at 1-800-SAMSUNG.

■ The Component jacks will not output video resolutions above 480p. To view 720p and 1080i, connect the DVD-VR 345 to your TV with an HDMI-HDMI cable. With HDMI connected, press the P.SCAN button to alternate between all available resolutions. (See page 39)

Step 3 : Connecting the Audio Cable

Select one of the Audio connections on the following pages.

Connecting to your TV

This connection will use your TV's speakers.
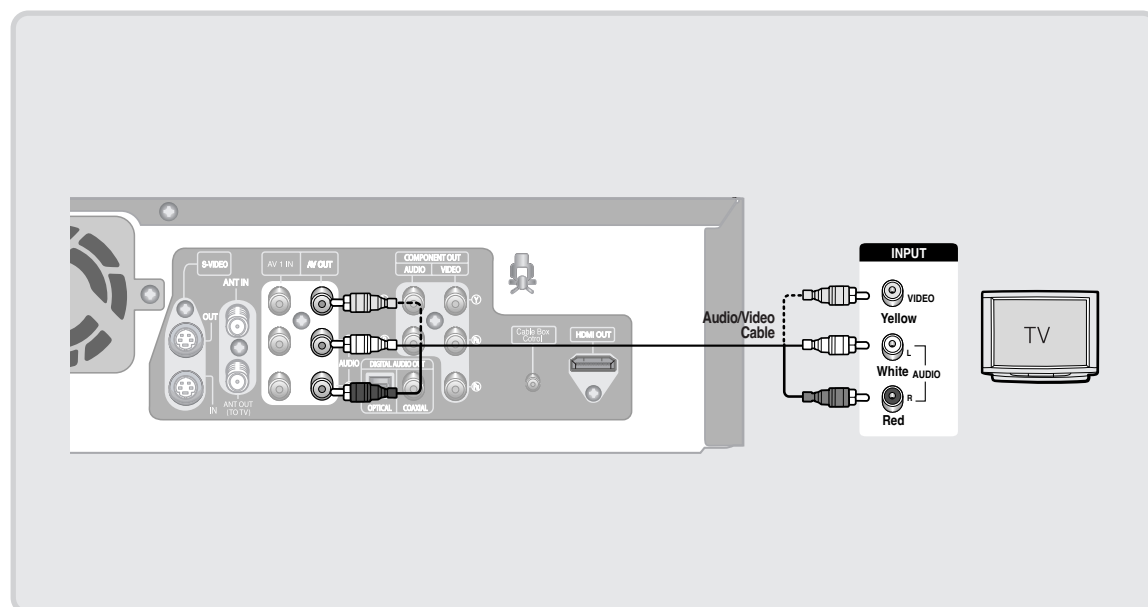
Connecting to a stereo amplifier with analog input jacks

If your stereo amplifier only has AUDIO INPUT jacks(L and R), use the AUDIO OUT jacks.

Audio/Video Cable

Red   White

R   L
ANALOG AUDIO
INPUT
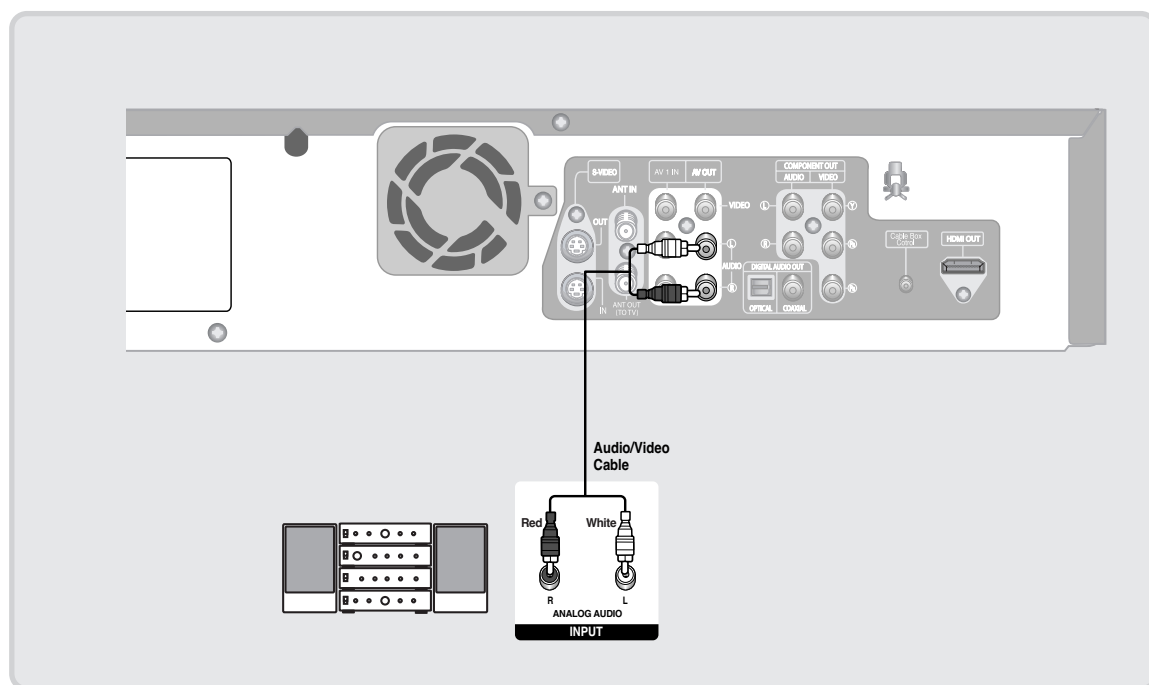
Connecting to an AV amplifier with a digital input jack

If your AV amplifier has a Dolby Digital or DTS decoder and a digital input jack, use this connection.
To enjoy Dolby Digital or DTS sound, you will need to set up the audio settings. (See page 37)

Optical Cable (not supplied) ← or → Coaxial Cable (not supplied)

AV amplifier

Rear(L)   Rear(R)

Front(L)   Front(R)

Subwoofer   Center

OPTICAL   COAXIAL
Digital Audio
INPUT
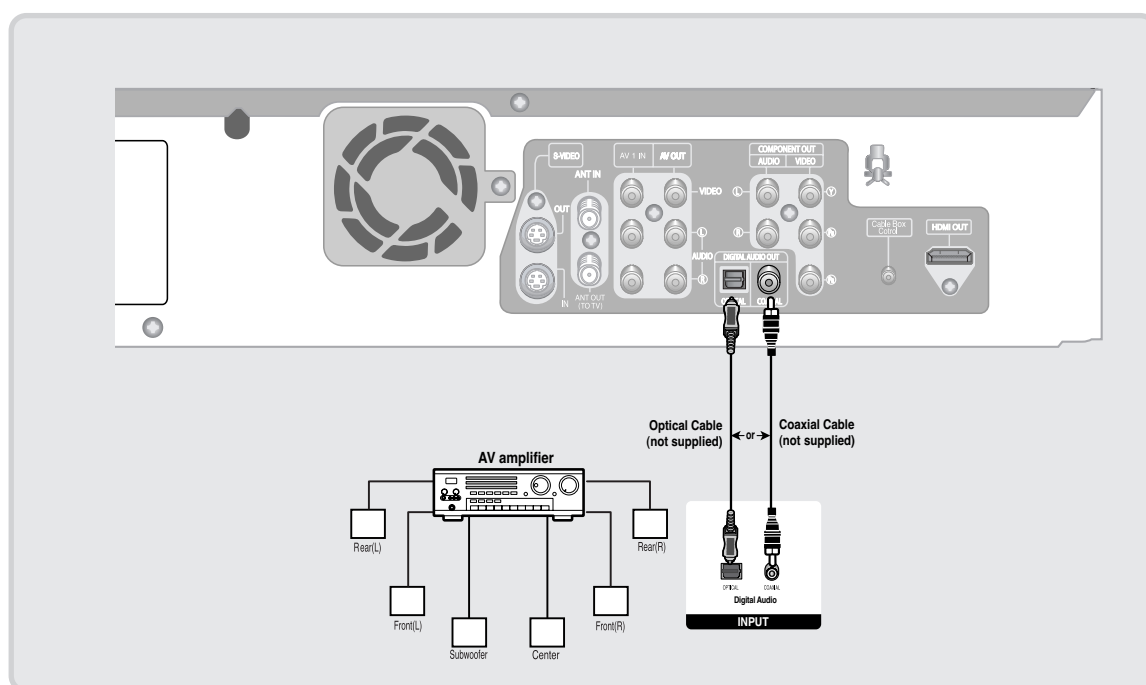
Manufactured under license from Dolby Laboratories. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories.

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

English **- 23**

Step 4 : Connecting HDMI/DVI to a TV

▌Connecting to a TV with HDMI Jack

Using an HDMI- HDMI cable(not included) connect the HDMI OUT jack on the rear of the DVD Recorder to the HDMI IN jack of your TV.
Press the input selector on your TV remote control until the HDMI signal from the DVD Recorder appears on your TV screen.
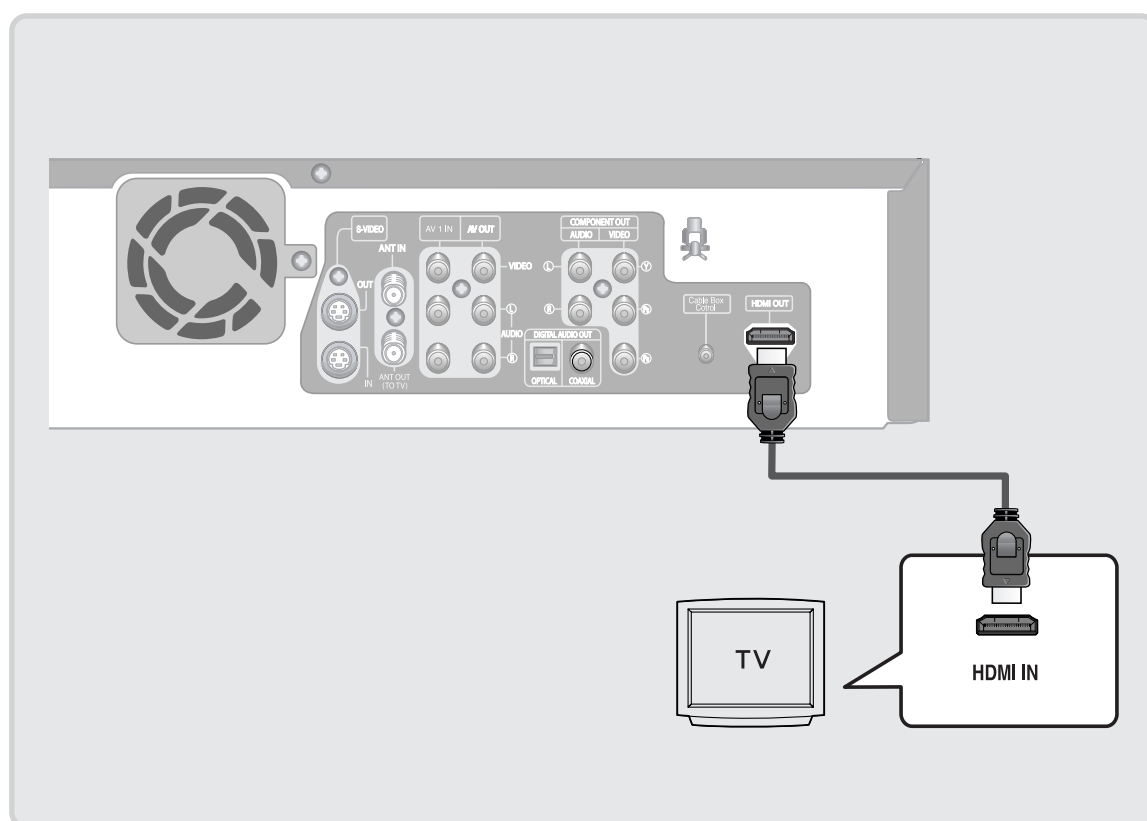
⚠ Caution	■ To hear audio on your TV when using HDMI, set the digital audio output to PCM (2 channel).(See page 37)
	■ Depending on the HDMI device(TV/HDMI Receiver) you use, audio may not be supported. If TV does not support Dolby digital/DTS, Audio output is not available when you set Digital output as Bitstream or select DTS On in Audio setup menu. In this case, set the digital audio output to PCM or DTS Off.

Connecting to a TV with DVI Jack

Using an HDMI-DVI cable (not included), connect the HDMI OUT terminal on the rear of the DVD Recorder to the DVI IN terminal of your TV.
Using the audio cables, connect the AUDIO (red and white) OUT terminals on the rear of the DVD Recorder to the AUDIO (red and white) IN terminals of your TV. Turn on the DVD Recorder and TV.
Press the input selector on your TV remote control until the DVI signal from the DVD Recorder appears on your TV screen.
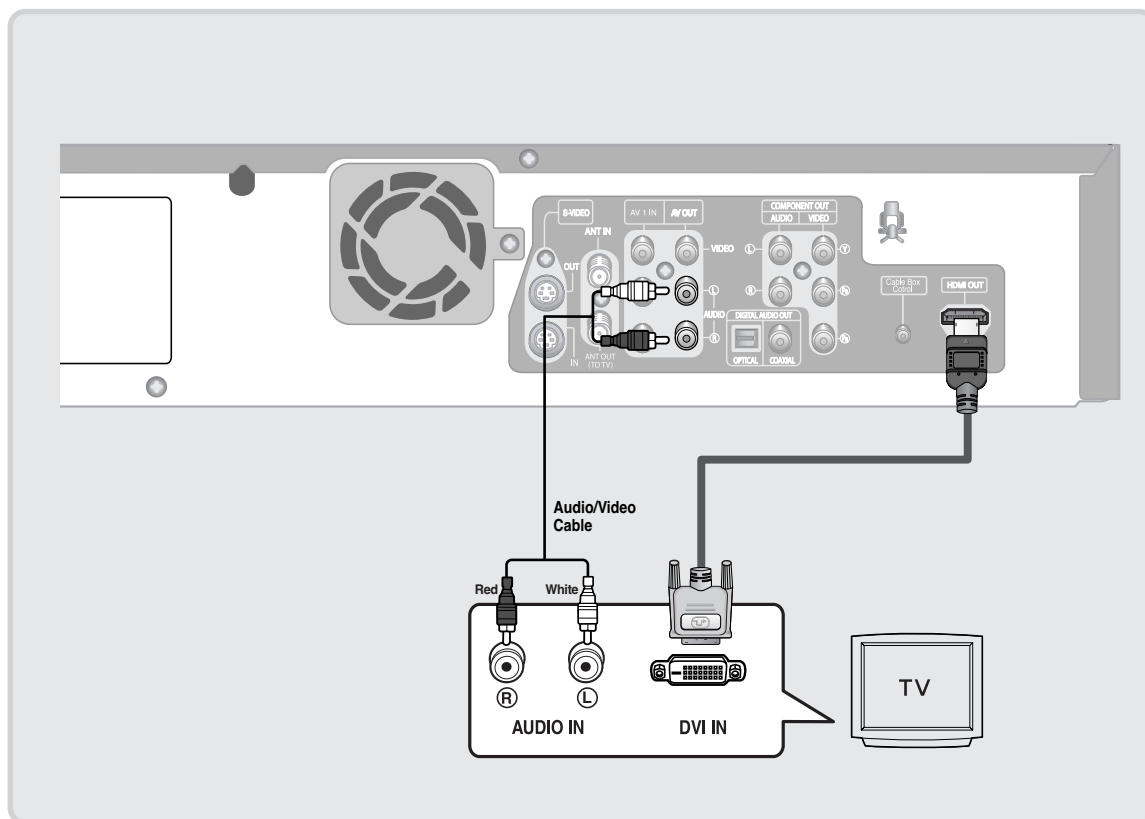
NOTE

■ To change HDMI output resolution, see page 39.
■ **HDMI (High Definition Multimedia Interface)**
  HDMI is an interface to enable the digital transmission of video and audio data with just a single connector. Since HDMI is based on DVI, it is completely compatible with DVI. The only difference between HDMI and DVI is that HDMI supports multi-channel audio.
  Using HDMI, the DVD recorder transmits a digital video and audio signal and displays a vivid picture on a TV having anHDMI input jack.
■ **HDMI connection description**
  HDMI connector - Both uncompressed video data and digital audio data (LPCM or Bit Stream data).
  - Even though the DVD recorder records analog audio and video, with HDMI the analog signal is converted to digital, and a pure digital signal is sent to the TV .
  - If TV does not support HDCP (High-bandwidth Digital Content Protection), snow noise appears on the screen.

■ **Why does Samsung use HDMI?**
  Analog TVs require an analog video/audio signal.
  However, when playing a DVD, the data transmitted to a TV is digital. Therefore either a digital-to-analog converter (in the DVD Recorder) or an analog-to-digital converter (in the TV) is required. During this conversion, the picture quality is degraded due to noise and signal loss. HDMI technology is superior because it requires no D/A conversion and is a pure digital signal from the DVD recorder to your TV.
■ **What is the HDCP?**
  HDCP (High-bandwidth Digital Content Protection) is a system for protecting DVD content outputted via HDMI from being copied. It provides a secure digital link between a video source (PC, DVD. etc) and a display device (TV, projector. etc). Content is encrypted at the source device to prevent unauthorized copies from being made.

Step 5 : Connecting External Devices

This allows you to connect your DVD Recorder & VCR to other external devices and view or record their outputs.

Connecting a VCR, Set-Top Box(STB) or DVD player to the AV 1 IN or S-VIDEO IN jacks

Connecting a VCR or external device to AV 1 IN jacks of the DVD Recorder & VCR. If desired, you can connect an S-Video cable to the S-Video In jack instead of connecting the Video (yellow) cable. You can record from connected equipment (VCR, STB or DVD).
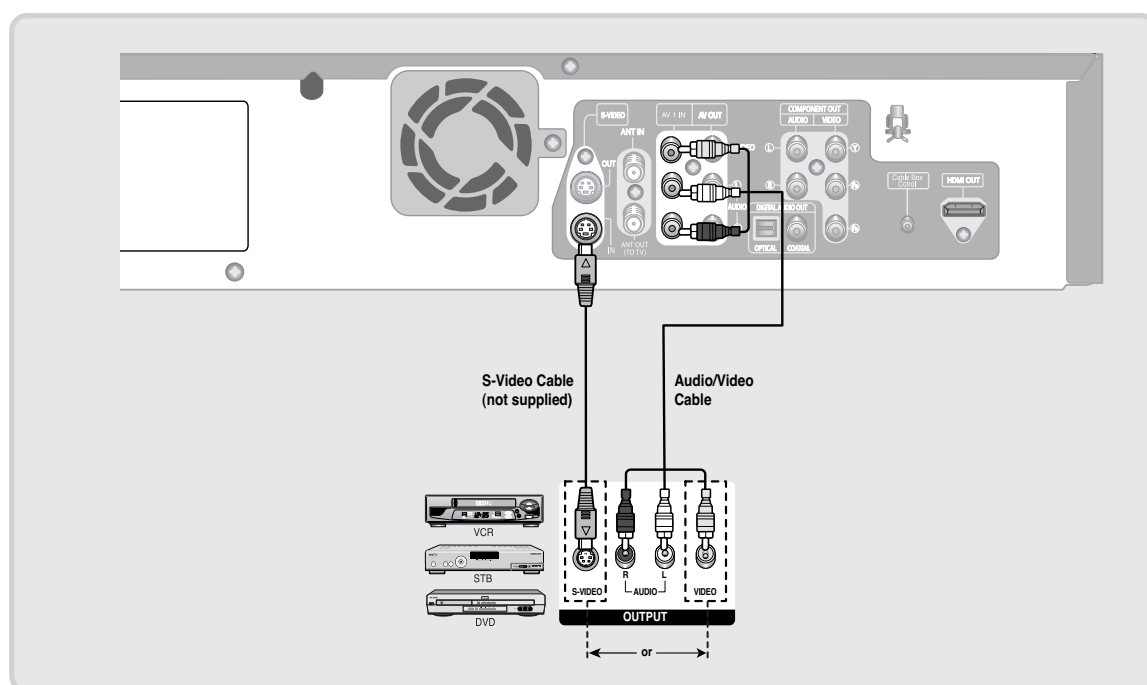
Note
- You can also use the AV 2 IN jacks on the front panel of the DVD Recorder & VCR.
- Press the INPUT SEL. button to select the AV1 or S-Video input.
- Copy protected content cannot be recorded.
- Depending on your input connection, you must choose **AV 1 (Composite)** or **S-video**. (See page 44)

Connecting a Camcorder to the AV 2 IN jacks

You can also use the AV 2 IN jacks on the front panel of the DVD Recorder & VCR. You can record from connected equipment, such as a camcorder. When an input source is inserted into AV 2 IN while viewing TV, the input will be switched to AV 2 IN automatically.
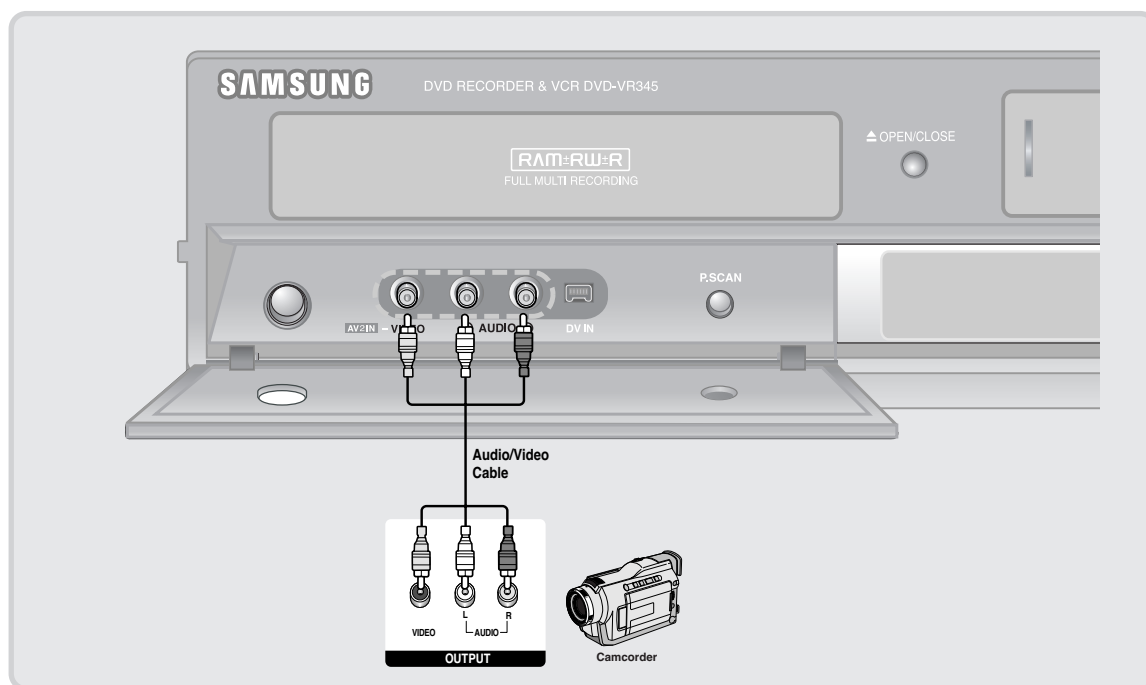
Note ■ If the AV 2 In input source is not selected automatically, press the INPUT SEL. button to select the AV 2 input.

English **- 27**

Connections

Connecting a Camcorder to the DV IN jack

If your camcorder has a DV output jack, connect it to the DV input jack of your DVD Recorder & VCR.

DV Cable
(not supplied)

DV OUT

Camcorder

✎
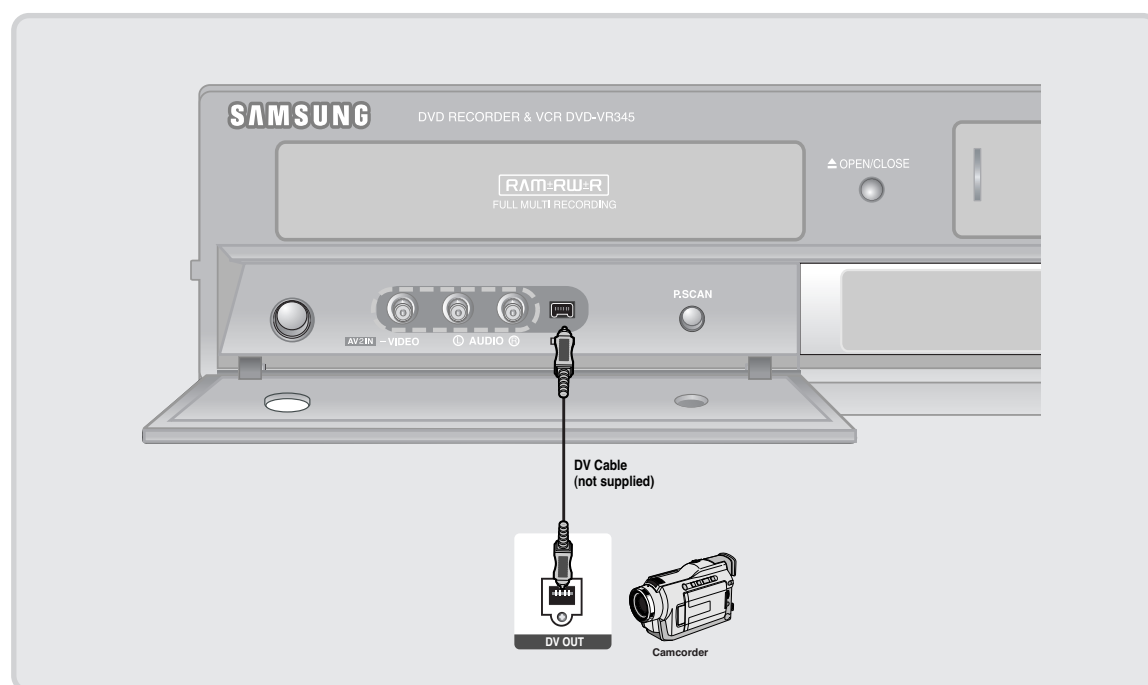
Note

■ If the input is not selected automatically, use
INPUT SEL. button to select proper input.

Step 6 : Connecting the Power Cord

After all connections are complete, plug the power cord in the wall outlet.

"Auto" appears in the front panel display. This means that the current time is being set automatically through the antenna under connection(Auto Program). The setup may take several minutes.

When the DVD Recorder & VCR operates normally, the current time is automatically set and displayed in the front panel display.
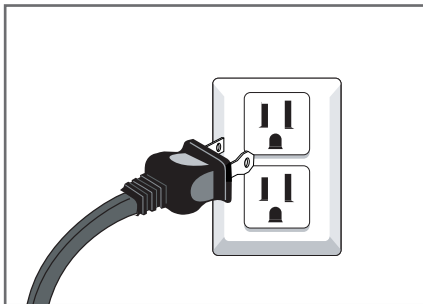
Step 7 : Preparing the Remote Control

Install Batteries in the Remote Control
• Open the battery cover on the back of the remote control.
• Insert two AAA batteries. Make sure that the polarities (+ and -) are aligned correctly.
• Replace the battery cover.

If the remote control does not operate properly:
• Check the polarity + - of the batteries (Dry-Cell)
• Check if the batteries are drained.
• Check if the remote sensor is blocked by obstacles.
• Check if there is any fluorescent lighting nearby.

Dispose of batteries according to local environmental regulations. Do not put them in the household trash.

Connections
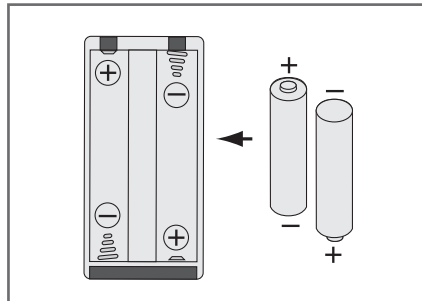
Setting the Remote Control

You can control part of another manufacturer's TV functions with this remote control.

• Buttons that can be controlled on your TV :
  TV POWER, INPUT SEL., VOL +/−, CH/TRK (∧/∨), TV MUTE, 0~9, 100+.

To determine whether your television is compatible, follow the instructions below.

1. Switch your television on.
2. Point the remote control towards the television.
3. Press and hold the **TV** button and enter the two-figure code simultaneously corresponding to the brand of your television by pressing the appropriate number buttons.

Brand	Codes	Brand	Codes
SAMSUNG	01,14,15,23,31	NEWSAN	27
DAEWOO	19	NOBLEX	25
EMERSON	21	PANASONIC	12,24
GRADIENTE	30	RCA	07,29
HITACHI	10	SANYO	05,20
JVC	11	SHARP	02,16,22
LG	06,08,18	SONY	03
LOEWE	28	TELEFUNKEN	26
MAGNAVOX	04	TOSHIBA	09
MITSUBISHI	13	ZENITH	17

Result: If your television is compatible with the remote control, it will switch off.
It is now programmed to operate with the remote control.

Note ■ If several codes are indicated for your television brand, try each one in turn until you find one that works. If you replace the remote control's batteries, you must set the brand code again.

You can then control the television using the following buttons.

Button	Function
TV POWER	Used to switch the television on and off.
INPUT SEL.	Used to select an external source.
VOL +/−	Used to adjust the volume of the television.
CH/TRK (∧/∨)	Used to select the desired channel.
TV MUTE	Used to toggle the sound on and off.
0~9	Used to input number directly.
100+	Used to select channels over 100.

Note ■ The various functions may not be able to be controlled on all televisions. If you encounter problems, operate the television directly.

System Setup

On-Screen Menu Navigation

The on-screen menus allow you to enable or disable various functions on your DVD Recorder & VCR.
Use the following buttons to open and navigate through the on-screen menus.

DVD-Recorder	Timer Record
⊙ No Disc	
📼 Timer Rec.	Timer Record ▶
⚙ Setup	Scheduled Record List ▶

✛ MOVE   ☞ ENTER   ↻ RETURN   ⊞ EXIT
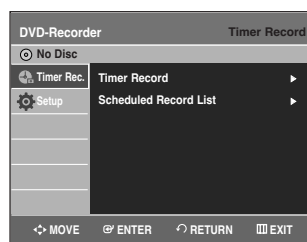
1 MENU Button
Press this button on the remote control to open the on-screen **MENU**. Press again to exit the on-screen **MENU**.

2 ▲/▼,◀ /▶ Buttons
Press these buttons on the remote control to move the selection bar ▲/▼,◀ /▶ to cycle through the menu options.

3 ENTER Button
Press this button on the remote control to confirm any new settings.

4 RETURN Button
Press this button on the remote control to return to the previous **MENU** screen displayed or to exit the on-screen **MENU**.

Auto Clock Set

This menu is used to set the current time. You need to set the time to use timer recording.

Note

■ You must have the antenna connected to set the Auto Clock. See pages 15~17 for Antenna Connections.

■ The Clock will be automatically set when you turn off the recorder.

System Setup

1 With the unit in Stop mode/No Disc mode, press the **MENU** button.

```
DVD-Recorder                    Timer Record
 No Disc
 Timer Rec.  Timer Record                    ▶
 Setup       Scheduled Record List           ▶




  ◇ MOVE      ☞ ENTER     ↻ RETURN    Ⅲ EXIT
```

2 Press the ▲▼ buttons to select **Setup**, then press the **ENTER** or ▶ button.

```
DVD-Recorder                          Setup
 No Disc
 Timer Rec.  System                          ▶
 Setup       Clock Set                       ▶
             Channel Set                     ▶
             Language                        ▶
             Audio                           ▶
             Video                           ▶
             Parental Control ♪              ▶
  ◇ MOVE      ☞ ENTER     ↻ RETURN    Ⅲ EXIT
```

3 Press the ▲▼ buttons to select **Clock Set**, then press the **ENTER** or ▶ button.

```
DVD-Recorder                      Clock Set
 No Disc
 Timer Rec.  Auto Clock Set                  ▶
 Setup       Manual Clock Set                ▶




  ◇ MOVE      ☞ ENTER     ↻ RETURN    Ⅲ EXIT
```

4 Press the ▲▼ buttons to select **Auto Clock Set**, then press the **ENTER** or ▶ button.

```
DVD-Recorder                  Auto Clock Set
 No Disc
 Timer Rec.  Clock Data CH    : Automatic    ▶
 Setup       Time Zone        : Automatic    ▶
             Daylight Saving  : Automatic    ▶



  ◇ MOVE      ☞ ENTER     ↻ RETURN    Ⅲ EXIT
```

Note
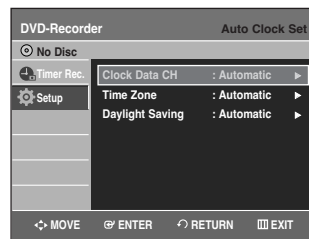
■ If your clock is set to the wrong time zone or daylight saving, you can adjust these settings without turning off the Auto Clock Set function.
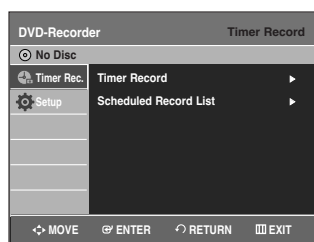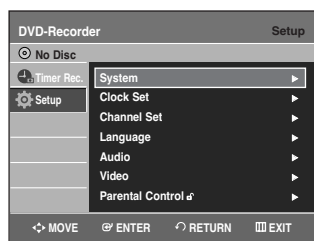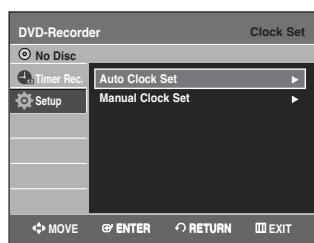
5 Press the ▲▼ buttons to select the sub menu (Clock Data CH, Time Zone or Daylight Saving), then press the **ENTER** or ▶ button.

Clock Data CH

Press the ▲▼ buttons to select a channel that carries a time signal, then press the **ENTER** button. Select **Auto** to set the channel automatically.

```
DVD-Recorder                   Clock Data CH
 No Disc
 Timer Rec.
 Setup           Select channel  :   ▲
                                    Auto
                                      ▼


  ◇ MOVE      ☞ ENTER     ↻ RETURN    Ⅲ EXIT
```

Time Zone

Press the ▲▼ buttons to select the time zone of your area, then press the **ENTER** or ▶ button. Select **Automatic** to set the time zone automatically.

```
DVD-Recorder                  Auto Clock Set
 No Disc
 Timer Rec.  Clock Data CH    Automatic
 Setup       Time Zone        Atlantic
             Daylight Saving  Eastern
                              Central
                              Mountain
                              Pacific
                              Alaska
                              Hawaii
  ◇ MOVE      ☞ ENTER     ↻ RETURN    Ⅲ EXIT
```

32 - English
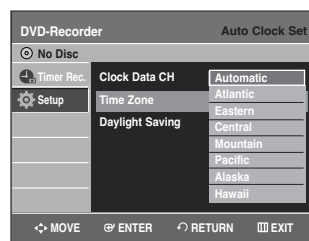
Daylight Saving

Press the ▲▼ buttons to select **Yes** or **No**, then press the **ENTER** or ▶ button.
Select **Automatic** to set the daylight saving automatically.

```
DVD-Recorder                    Auto Clock Set
◉ No Disc
Timer Rec.    Clock Data CH    : Automatic    ▶
Setup         Time Zone        : Automatic    ▶
              Daylight Saving   Automatic
                                Yes
                                No

   MOVE      ENTER    RETURN    EXIT
```

Manual Clock Set

If Auto Setup fails to set the DVD Recorder & VCR's internal clock by locating a local TV station, follow these steps to set the date and time manually.

Note   For accurate Timer Recording, your DVD Recorder & VCR's internal clock must be set correctly.

1 With the unit in Stop mode/No Disc mode, press the **MENU** button.

```
DVD-Recorder                    Timer Record
◉ No Disc
Timer Rec.    Timer Record            ▶
Setup         Scheduled Record List   ▶




   MOVE      ENTER    RETURN    EXIT
```

2 Press the ▲▼ buttons to select **Setup**, then press the **ENTER** or ▶ button.

```
DVD-Recorder                    Setup
◉ No Disc
Timer Rec.    System            ▶
Setup         Clock Set         ▶
              Channel Set       ▶
              Language          ▶
              Audio             ▶
              Video             ▶
              Parental Control  ▶
   MOVE      ENTER    RETURN    EXIT
```

3 Press the ▲▼ buttons to select **Clock Set**, then press the **ENTER** or ▶ button.

```
DVD-Recorder                    Clock Set
◉ No Disc
Timer Rec.    Auto Clock Set           ▶
Setup         Manual Clock Set         ▶




   MOVE      ENTER    RETURN    EXIT
```

4 Press the ▲▼ buttons to select **Manual Clock Set**, then press the **ENTER** or ▶ button.

```
DVD-Recorder                    Manual Clock Set
◉ No Disc
Timer Rec.
Setup    Month  Day   Year   Hour  Minute  AM/PM
           ▲
          01    01   2006    12    00      AM
           ▼
         SUN
         Press numeric keys or ▲▼ keys.

   MOVE      ENTER    RETURN    EXIT
```

5 Press the ▲▼◀ ▶ buttons to select the Current Date and Time, then press the **ENTER** button.
When the current time is stored in memory and then the set is powered off, the current time will appear in the front panel display.

▲▼ : Sets the value
     You can set the value using the number (0~9) buttons.

◀ ▶ : Moves to items

System Setup

English **- 33**

Channel Set

This feature allows you to manually set the DVD Recorder & VCR's tuner band to Antenna or Cable, whichever you connected to the Antenna In jack during initial setup.
• Use this setting only if Auto Setup detected the incorrect tuner band, i.e. channels are coming in on the wrong channel numbers.

1 With the unit in Stop mode/No Disc mode, press the **MENU** button.

```
DVD-Recorder                        Timer Record
⊙ No Disc
 Timer Rec.   Timer Record                      ▶
 Setup        Scheduled Record List             ▶




   ◆ MOVE      ☞ ENTER    ↻ RETURN    ▥ EXIT
```

2 Press the ▲▼ buttons to select **Setup**, then press the **ENTER** or ▶ button.

```
DVD-Recorder                               Setup
⊙ No Disc
 Timer Rec.   System                            ▶
 Setup        Clock Set                         ▶
              Channel Set                       ▶
              Language                          ▶
              Audio                             ▶
              Video                             ▶
              Parental Control ☞                ▶
   ◆ MOVE      ☞ ENTER    ↻ RETURN    ▥ EXIT
```

3 Press the ▲▼ buttons to select **Channel Set**, then press **ENTER** or ▶ button.

```
DVD-Recorder                          Channel Set
⊙ No Disc
 Timer Rec.   Antenna/Cable TV   : Antenna       ▶
 Setup        Auto Channel Memory                ▶
              Channel Add/Delete                 ▶
              RF Output Channel  : CH3           ▶




   ◆ MOVE      ☞ ENTER    ↻ RETURN    ▥ EXIT
```
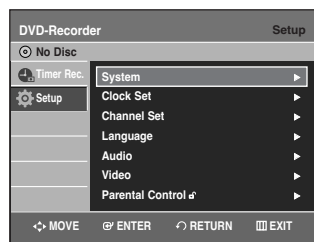
4 Press the ▲▼ buttons to select **Antenna/Cable TV**, then press the **ENTER** or ▶ button.

```
DVD-Recorder                          Channel Set
⊙ No Disc
 Timer Rec.   Antenna/Cable TV   Antenna
 Setup        Auto Channel Mem  Cable TV
              Channel Add/Delete                 ▶
              RF Output Channel  : CH3           ▶




   ◆ MOVE      ☞ ENTER    ↻ RETURN    ▥ EXIT
```
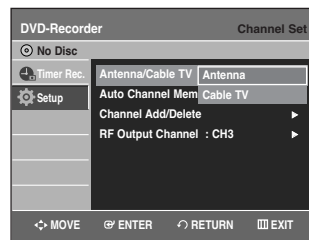
Select the Antenna or Cable TV(Signal Source) that matches the antenna connection you selected on pages 15~17.

• **Antenna** - Select this if the DVD Recorder & VCR is connected to an indoor or outdoor VHF/UHF antenna. (See pages 15, 17)

• **Cable TV** - Select this if the DVD Recorder & VCR is connected to a cable TV. (See page 16)

Auto Channel Memory

Auto Channel Memory will automatically seek and store all active channels in your area.

1 With the unit in Stop mode/No Disc mode, press the **MENU** button.

2 Press the ▲▼ buttons to select **Setup**, then press the **ENTER** or ▶ button.

3 Press the ▲▼ buttons to select **Channel Set**, then press the **ENTER** or ▶ button.

```
DVD-Recorder                          Channel Set
⊙ No Disc
 Timer Rec.   Antenna/Cable TV   : Antenna       ▶
 Setup        Auto Channel Memory                ▶
              Channel Add/Delete                 ▶
              RF Output Channel  : CH3           ▶




   ◆ MOVE      ☞ ENTER    ↻ RETURN    ▥ EXIT
```

System Setup

34 - English
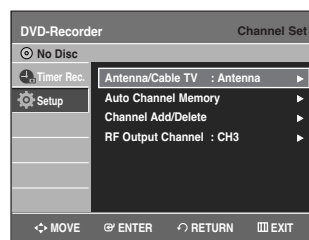
4 Press the ▲▼ buttons to select **Auto Channel Memory**, then press the **ENTER** or ▶ button.

```
Auto Channel Memory
Total channel numbers : 02/125
Saved channel :
                                      1%
              Stop
```

- The DVD Recorder & VCR will automatically search for all available channels in the selected tuner band. This procedure may take a few minutes to complete.
- When finished, the lowest channel will be displayed.
- If you want to stop or cancel scanning, press the **ENTER** button. Then select 'YES'.

Channel Add/Delete

Use this feature if Auto Channel Memory missed a channel that you would like to add or if you wish to remove a channel.

1 With the unit in Stop mode/No Disc mode, press the **MENU** button.

2 Press the ▲▼ buttons to select **Setup**, then press the **ENTER** or ▶ button.

3 Press the ▲▼ buttons to select **Channel Set**, then press the **ENTER** or ▶ button.

```
DVD-Recorder                    Channel Set
 No Disc
 Timer Rec.    Antenna/Cable TV   : Antenna      ▶
 Setup         Auto Channel Memory              ▶
               Channel Add/Delete               ▶
               RF Output Channel  : CH3          ▶

  MOVE      ENTER     RETURN    EXIT
```
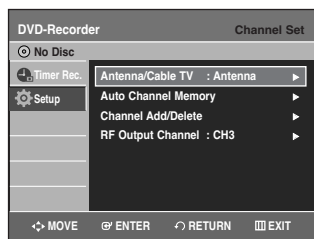
4 Press the ▲▼ buttons to select **Channel Add/Delete**, then press the **ENTER** or ▶ button.

```
DVD-Recorder                  Channel Add/Delete
 No Disc
 Timer Rec.
 Setup              Select channel  :    1

                         Add        Delete

  NUMBER     ENTER     RETURN    EXIT
```

5 Press the ▲▼ or number buttons to select the channels you want to add or delete on the Select channel screen. Then, press the **ENTER** button.

- Using **CH/TRK** (∧/∨) buttons for channel selection allows the user to add/delete one channel at a time.
- Using ▲▼ buttons for channel selection jumps to the next channel memorized in Auto Channel Memory.

6 Press the ◀ ▶ buttons to select **Add** or **Delete**, then press the **ENTER** button.

```
DVD-Recorder                  Channel Add/Delete
 No Disc
 Timer Rec.
 Setup              Select channel  :   11

                      Channel is added.

                         Add        Delete

  NUMBER     ENTER     RETURN    EXIT
```
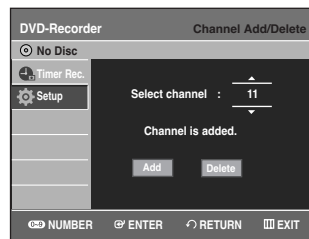
RF Output Channel

When you connect the DVD Recorder & VCR to your TV with the RF Antenna Cable, follow the steps below to set the RF Output Channel.

1 With the unit in Stop mode/No Disc mode, press the **MENU** button.

2 Press the ▲▼ buttons to select **Setup**, then press the **ENTER** or ▶ button.

System Setup

English **- 35**

3 Press the ▲▼ buttons to select **Channel Set**, then press **ENTER** or ► button.

DVD-Recorder   Channel Set
⊙ No Disc
⏲ Timer Rec.   Antenna/Cable TV   : Antenna   ►
⚙ Setup   Auto Channel Memory   ►
                Channel Add/Delete   ►
                RF Output Channel : CH3   ►

✢ MOVE   ☞ ENTER   ↻ RETURN   ▥ EXIT
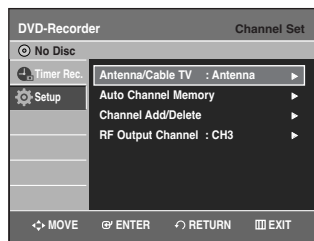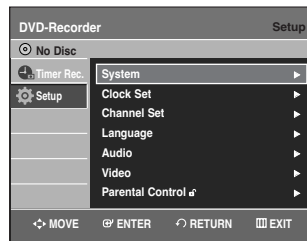
4 Press the ▲▼ buttons to select **RF Output Channel**, then press the **ENTER** or ► button.

DVD-Recorder   Channel Set
⊙ No Disc
⏲ Timer Rec.   Antenna/Cable TV   : Antenna   ►
⚙ Setup   Auto Channel Memory   ►
                Channel Add/Delete   ►
                RF Output Channel   CH3
                                    CH4

✢ MOVE   ☞ ENTER   ↻ RETURN   ▥ EXIT

5 Press the ▲▼ buttons to select **CH3** or **CH4**, then press the **ENTER** or ► button.
The message "Please tune your TV to channel 3 (4)" will appear on the screen. Change your TV channel to CH3 or CH4 to match the RF Output Channel of the DVD Recorder & VCR.

Setting Up the Language Options

If you set audio, subtitle, disc menu and on-screen menu language in advance, they will come up automatically every time you watch a movie.
If the selected language is not recorded on the disc, the original pre-recorded language is selected.

1 With the unit in Stop mode/No Disc mode, press the **MENU** button.

2 Press the ▲▼ buttons to select **Setup**, then press the **ENTER** or ► button.
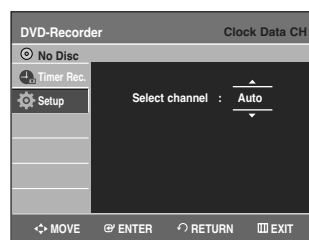
DVD-Recorder   Setup
⊙ No Disc
⏲ Timer Rec.   System   ►
⚙ Setup   Clock Set   ►
                Channel Set   ►
                Language   ►
                Audio   ►
                Video   ►
                Parental Control ⌨   ►

✢ MOVE   ☞ ENTER   ↻ RETURN   ▥ EXIT

3 Press the ▲▼ buttons to select **Language**, then press the **ENTER** or ► button.
Language setup menu will be displayed.

DVD-Recorder   Language
⊙ No Disc
⏲ Timer Rec.   Audio   : Original   ►
⚙ Setup   Subtitle   : Automatic   ►
                Disc Menu   : English   ►
                On-Screen Menu   : English   ►

✢ MOVE   ☞ ENTER   ↻ RETURN   ▥ EXIT

4 Press the ▲▼ buttons to select the desired language option, press the **ENTER** or ► button.

DVD-Recorder   Language
⊙ No Disc
⏲ Timer Rec.   Audio   Original   ▲
⚙ Setup   Subtitle   English
                Disc Menu   Français
                On-Screen Menu   Deutsch
                                 Español
                                 Italiano
                                 Nederlands
                                 Korean   ▼

✢ MOVE   ☞ ENTER   ↻ RETURN   ▥ EXIT

• **Audio**: For the disc audio language.
• **Subtitle**: For the disc subtitles.
• **Disc Menu**: For the disc menu contained on the disc.
• **On-Screen Menu**: For the on-screen menu of your DVD Recorder & VCR.

5 Press the ▲▼ buttons to select the desired language, then press the **ENTER** or ► button.

✎ ■ Press the **RETURN** or ◄ button to return to the
Note   previous menu. Press the **MENU** button to exit the menu.
    ■ The selected language will only appear if it is supported on the disc.

System Setup

Setting Up the Audio Options

Allows you to setup the audio device and sound status settings depending on the audio system in use.

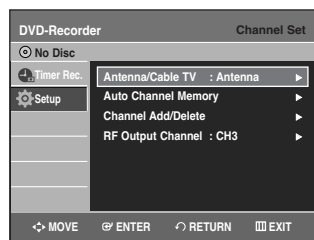**1** With the unit in Stop mode/No Disc mode, press the **MENU** button.

2 Press the ▲▼ buttons to select **Setup,** then press the **ENTER** or ▶ button.

```
DVD-Recorder                              Setup
◉ No Disc
⏱ Timer Rec.    System                        ▶
⚙ Setup         Clock Set                     ▶
                Channel Set                   ▶
                Language                      ▶
                Audio                         ▶
                Video                         ▶
                Parental Control ♪            ▶

   ✛ MOVE      ☞ ENTER     ↺ RETURN     ▥ EXIT
```
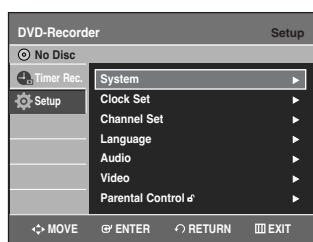
3 Press the ▲▼ buttons to select **Audio**, then press the **ENTER** or ▶ button.
Audio setup menu will be displayed.

```
DVD-Recorder                              Audio
◉ No Disc
⏱ Timer Rec.    Digital Output      : PCM     ▶
⚙ Setup         DTS                 : Off     ▶
                Dynamic Compressiom : On      ▶




   ✛ MOVE      ☞ ENTER     ↺ RETURN     ▥ EXIT
```
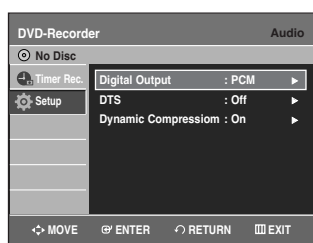
4 Press the ▲▼ buttons to select the desired audio option, then press the **ENTER** or ▶ button.

5 Press the ▲▼ buttons to select the desired item, then press the **ENTER** or ▶ button.

✎ **Note** ■ Press the **RETURN** or ◀ button to return to the previous menu.
Press the **MENU** button to exit the menu.

Digital Output

1. **PCM** : Converts to PCM(2CH) 48kHz audio.
Select PCM when using the Analog Audio Outputs.
2. **Bitstream** : Converts to Dolby Digital Bitstream.
Select Bitstream when using the Digital Audio Outputs.

✎ **Note** ■ Be sure to select the correct Digital Output or no audio will be heard.

DTS

1. **Off** : Doesn't output digital signal.
2. **On** : Outputs DTS Bitstream via digital output only. Select DTS when connecting to a DTS Decoder.

✎ **Note** ■ When DTS soundtrack is played, sound is not output from Analog Audio Output.

Dynamic Compression

This is only active when a Dolby Digital signal is detected.

1. **On** : When the Movie soundtracks are played at low volume or from small speakers, the system can apply appropriate compression to make low-level content more intelligible and prevent dramatic passages from getting too loud.
2. **Off** : You can enjoy the movie with the standard Dynamic Range.

System Setup

English **- 37**

Setting Up the Display(Video) Options

This function allows you to setup the TV screen settings.

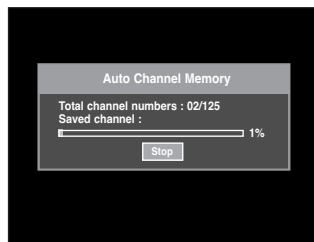**1** With the unit in Stop mode/No Disc mode, press the **MENU** button.

2 Press the ▲▼ buttons to select **Setup**, then press the **ENTER** or ► button.

```
DVD-Recorder                         Setup
 ⊙ No Disc
   Timer Rec.   System                    ►
   Setup        Clock Set                 ►
               Channel Set               ►
               Language                  ►
               Audio                     ►
               Video                     ►
               Parental Control          ►

  ◄◊► MOVE    ☞ ENTER    ↻ RETURN    Ⅲ EXIT
```
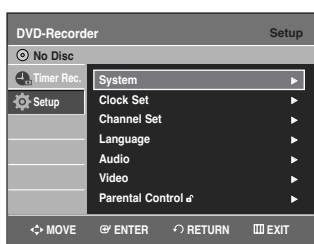
3 Press the ▲▼ buttons to select **Video**, then press the **ENTER** or ► button.
Video option menu will be displayed.

```
DVD-Recorder                         Video
 ⊙ No Disc
   Timer Rec.   TV Aspect        : 16:9 Wide  ►
   Setup        Input Level      : Darker     ►
               Black Level      : 7.5 IRE    ►
               3D Noise Reduction : Off       ►
               HDMI/DVI Resolution : 480P     ►
               DivX(R) Registration          ►

  ◄◊► MOVE    ☞ ENTER    ↻ RETURN    Ⅲ EXIT
```
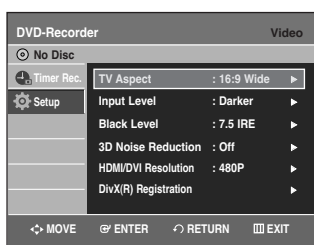
4 Press the ▲▼ buttons to select the desired video option, then press the **ENTER** or ► button.

5 Press the ▲▼ buttons to select the desired item, then press the **ENTER** or ► button.

✎ ■ Press the **RETURN** or ◄ button to return to the previous menu.
Press the **MENU** button to exit the menu.

TV Aspect

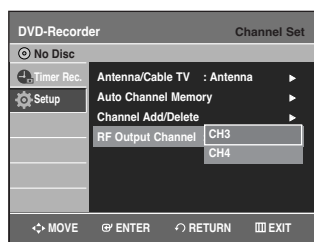Depending on the type of television you have, you may want to adjust the screen setting. (aspect ratio)

• **4:3 Letter Box** : Select when you want to see the total 16:9 ratio screen DVD supplies, even though you have a TV with a 4:3 ratio screen. Black bars will appear at the top and bottom of the screen.
• **4:3 Pan & Scan** : Select this for a conventional size TV when you want to see the central portion of the 16:9 screen. (Extreme left and right side of movie picture will be cut off.)
• **16:9 Wide** : You can view the full 16:9 picture on your wide-screen TV.

Input Level

Adjusts the level of the input signal.

• **Darker :** If you feel the screen is too light and you want to make the screen darker.
• **Lighter :** If you feel the screen is too dark and you want to make the screen lighter.

Black Level

Adjusts the black level of the screen.

• **7.5 IRE** : This will enhance the black level for increased brightness/contrast when viewing DVDs.
Select this when you want to make the screen lighter.
• **0 IRE** : This is the standard NTSC reference black level for consistent brightness/contrast across all sources.
Select this when you want to make the screen darker.

3D Noise Reduction

• **Off :** Normal
• **On** : Select to remove noise from the screen.

✎
Note ■ This function depends on disc type. It may not work for some disc types.
■ IRE: Short for the Institute of Radio Engineers. An IRE unit is a relative unit of measure equaling 1/140th of the peak-to peak (p-p) video amplitude.

System Setup

HDMI/DVI Resolution

This setting is used when the unit is connected by HDMI or DVI to Display devices (TV, Monitor, etc).

```
DVD-Recorder                              Video
⊙ No Disc
⊟ Timer Rec.   TV Aspect          : 16:9 Wide    ►
⚙ Setup        Input Level        : Darker       ►
               Black Level        : 7.5 IRE      ►
               3D Noise Reduction : Off          ►
               HDMI/DVI Resolution   480P
               DivX(R) Registration  720P
                                     1080i

   ✛ MOVE    ☞ ENTER    ↩ RETURN    ▥ EXIT
```
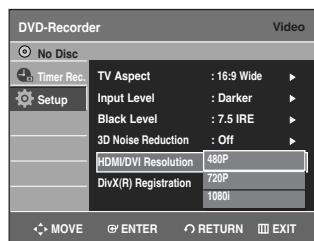
- 480p : 720 x 480
- 720p : 1280 x 720
- 1080i : 1920 x 1080

Output selection

Connect the DVD-R345 to your TV via HDMI or DVI. Set your TV's input to HDMI or DVI.

- Press the **P.SCAN** button while the unit is in stop mode to select the output resolution.
- If your TV is connected the HDMI or DVI cable, the output resolution mode changes in the following sequence each time you press the **P.SCAN** button:

```
┌→ 480p → 720p → 1080i ┐
```

- If your TV is connected via AV or component cables(without HDMI/DVI cable), the output resolution mode toggles between 480p/480i.

✎
Note

■ Even if HDMI/DVI cable is connected to your TV, the AV connection outputs only 480i and the Component connection outputs only 480p irrespective of the on-screen display.

DivX(R) Registration

Please use the Registration code to register your DVD Recorder with the DivX(R) Video On Demand format. To learn more, visit www.divx.com/vod

Setting Up the Parental Control

The Parental Control function works in conjunction with DVDs that have been assigned a rating - which helps you control the types of DVDs that your family watches. There are up to 8 rating levels on a disc.

1 With the unit in Stop mode/No Disc mode, press the **MENU** button on the remote control.

2 Press the ▲▼ buttons to select **Setup**, then press the **ENTER** or ► button.

```
DVD-Recorder                              Setup
⊙ No Disc
⊟ Timer Rec.   System                              ►
⚙ Setup        Clock Set                           ►
               Channel Set                         ►
               Language                            ►
               Audio                               ►
               Video                               ►
               Parental Control ♪                  ►

   ✛ MOVE    ☞ ENTER    ↩ RETURN    ▥ EXIT
```
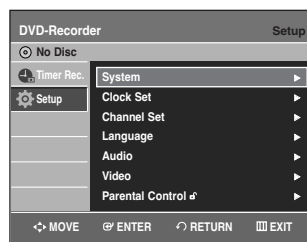
3 Press the ▲▼ buttons to select **Parental Control**, then press the **ENTER** or ► button.

```
DVD-Recorder                       Parental Control
⊙ No Disc
⊟ Timer Rec.
⚙ Setup              Create the password
                     ☐  ☐  ☐  ☐



   ☞ NUMBER   ☞ ENTER    ↩ RETURN    ▥ EXIT
```
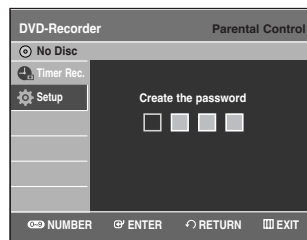
4 Create a 4-digit password using the 0 to 9 buttons on the remote control.

```
DVD-Recorder                       Parental Control
⊙ No Disc
⊟ Timer Rec.
⚙ Setup              Confirm the password
                     ☐  ☐  ☐  ☐



   ☞ NUMBER   ☞ ENTER    ↩ RETURN    ▥ EXIT
```

System Setup

English **- 39**
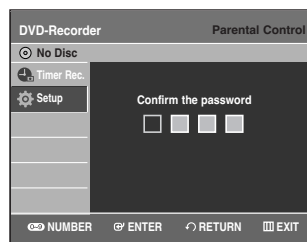
5 The Re-enter Password screen appears to confirm the password. Enter your password again, and then press the **ENTER** or ▶ button.

```
DVD-Recorder              Parental Control
⊙ No Disc
  Timer Rec.   Password      Off
  Setup                      On

     ◄◊► MOVE   ☞ ENTER   ↻ RETURN   ▥ EXIT
```

6 Press the ▲▼ buttons to select **On**, then press the **ENTER** or ▶ button.
The Parental Control screen appears.

✎
Note
■ Press the **RETURN** or ◄ button to return to the previous menu. Press the **MENU** button to exit the menu.
■ Refer to Troubleshooting if you forget your password. (See page 98)

About the Rating Level

1 Press the ▲▼ buttons to select **Rating Level**, then press the **ENTER** or ▶ button.

```
DVD-Recorder              Parental Control
⊙ No Disc
  Timer Rec.   Password      : On          ▶
  Setup        Rating Level  : Level 1 Kids ▶
               Change Password             ▶

     ◄◊► MOVE   ☞ ENTER   ↻ RETURN   ▥ EXIT
```

```
DVD-Recorder              Parental Control
⊙ No Disc
  Timer Rec.   Password      Level 8 Adults
  Setup        Rating Level  Level 7
               Change Password Level 6
                             Level 5
                             Level 4
                             Level 3
                             Level 2
                             Level 1 Kids

     ◄◊► MOVE   ☞ ENTER   ↻ RETURN   ▥ EXIT
```
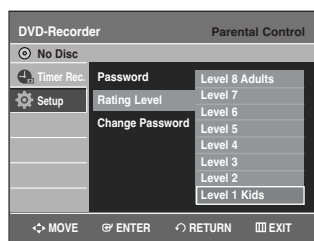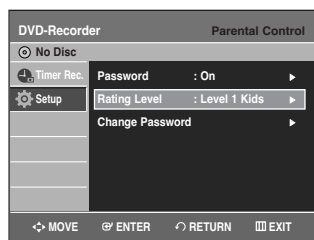
2 Press the ▲▼ buttons to select the rating level you want, then press the **ENTER** or ▶ button.
For example, if you select up to Level 6, discs that contain Level 7, 8 will not play. A larger number indicates that the program is intended for adult use only.

About the Change Password

1 Press the ▲▼ buttons to select **Change Password**, then press the **ENTER** or ▶ button.

```
DVD-Recorder              Parental Control
⊙ No Disc
  Timer Rec.   Password      : On          ▶
  Setup        Rating Level  : Level 1 Kids ▶
               Change Password             ▶

     ◄◊► MOVE   ☞ ENTER   ↻ RETURN   ▥ EXIT
```

```
DVD-Recorder              Change Password
⊙ No Disc
  Timer Rec.
  Setup          Enter the password
                 □ ▩ ▩ ▩

     ☎ NUMBER   ☞ ENTER   ↻ RETURN   ▥ EXIT
```
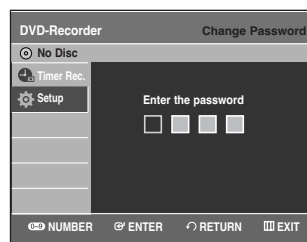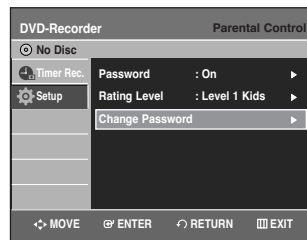
2 Enter the 4-digit password using the number buttons on the remote control.
The 'Confirm the password' message will be displayed.
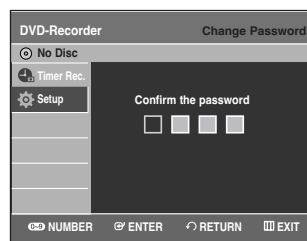
```
DVD-Recorder              Change Password
⊙ No Disc
  Timer Rec.
  Setup          Confirm the password
                 □ ▩ ▩ ▩

     ☎ NUMBER   ☞ ENTER   ↻ RETURN   ▥ EXIT
```

3 Enter your password again.

✎
Note
■ Press the **RETURN** or ◄ button to return to the previous menu.
Press the **MENU** button to exit the menu.

System Setup

40 - English

VCR Setting

This function allows you to set up the VCR.

1 With the unit in Stop mode/No Disc mode, press the **MENU** button.

2 Press the ▲▼ buttons to select **Setup**, then press the **ENTER** or ▶ button.

```
DVD-Recorder                              Setup
No Disc
  Timer Rec.   System                         ▶
  Setup        Clock Set                      ▶
               Channel Set                    ▶
               Language                       ▶
               Audio                          ▶
               Video                          ▶
               Parental Control               ▶

     MOVE        ENTER       RETURN      EXIT
```

3 Press the ▲▼ buttons to select **System**, then press the **ENTER** or ▶ button.

```
DVD-Recorder                             System
No Disc
  Timer Rec.   VCR                            ▶
  Setup        Set Top Box Control            ▶
               Video Input      : AV 1        ▶
               DVD EP Mode Time : 6 Hours     ▶
               Chapter Creator  : Off         ▶
               Quick Recording  : Off         ▶

     MOVE        ENTER       RETURN      EXIT
```
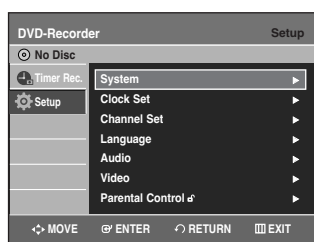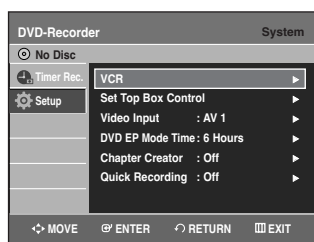
4 Press the ▲▼ buttons to select **VCR**, then press the **ENTER** or ▶ button.

```
DVD-Recorder                               VCR
No Disc
  Timer Rec.   Tape Length      : T120       ▶
  Setup        Auto Play        : On         ▶
               Auto Repeat      : Off        ▶




     MOVE        ENTER       RETURN      EXIT
```
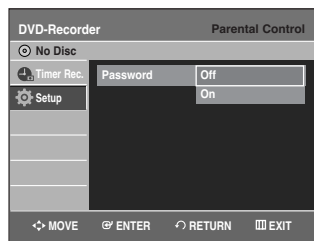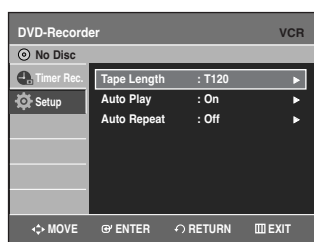
5 Press the ▲▼ buttons to select the desired VCR option, then press the **ENTER** or ▶ button.

6 Press the ▲▼ buttons to select the desired item, then press the **ENTER** or ▶ button.

Tape Length

This information is usually printed on the tape box. The menu cycles through: T-120, T-160 or T-180. Once the type of cassette is set, the VCR can display the amount of time remaining on the tape when you press the **INFO** button.

```
DVD-Recorder                               VCR
No Disc
  Timer Rec.   Tape Length     T120
  Setup        Auto Play       T160
               Auto Repeat     T180




     MOVE        ENTER       RETURN      EXIT
```
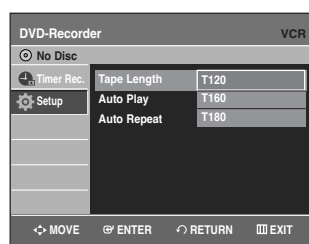
Auto Play

If you want your videotapes to play automatically when you insert them, turn on Auto Play.

- **Off** : Auto play is disabled.
- **On** : The VCR will automatically begin playing a video tape when it is inserted, as long as the safety tab of the cassette has been removed.

```
DVD-Recorder                               VCR
No Disc
  Timer Rec.   Tape Length     : T120        ▶
  Setup        Auto Play       Off
               Auto Repeat     On




     MOVE        ENTER       RETURN      EXIT
```
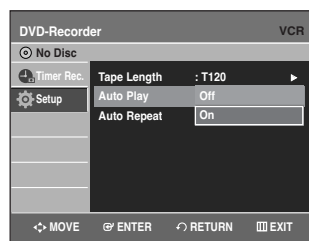
Auto Repeat

It sets the VCR to play a tape repeatedly (unless a tape control is activated :Stop, Fast Forward or Rewind).

```
DVD-Recorder                               VCR
No Disc
  Timer Rec.   Tape Length     : T120        ▶
  Setup        Auto Play       : On          ▶
               Auto Repeat     Off
                               On



     MOVE        ENTER       RETURN      EXIT
```

System Setup

English **- 41**
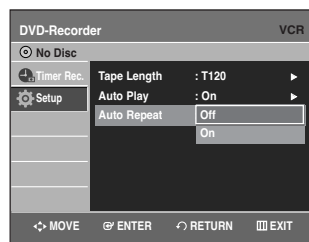
System Setting

Set Top Box Control

If you have the cable box/satellite receiver connected as shown on pages 16-17, you can control the set top box after setting up this menu.
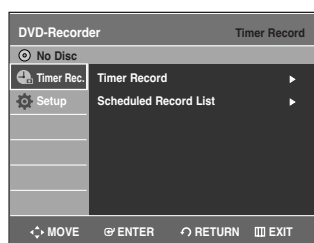
1 With the unit in Stop mode/No Disc mode, press the **MENU** button.

DVD-Recorder	Timer Record
⊙ No Disc	
📅 Timer Rec.	Timer Record ▶
⚙ Setup	Scheduled Record List ▶
✧ MOVE ☞ ENTER ↻ RETURN ▥ EXIT	

2 Press the ▲▼ buttons to select Setup, then press the **ENTER** or ▶ button.

DVD-Recorder	Setup
⊙ No Disc	
📅 Timer Rec.	System ▶
⚙ Setup	Clock Set ▶
	Channel Set ▶
	Language ▶
	Audio ▶
	Video ▶
	Parental Control ♪ ▶
✧ MOVE ☞ ENTER ↻ RETURN ▥ EXIT	

3 Press the ▲▼ buttons to select System, then press the **ENTER** or ▶ button.
System menu will be displayed.

DVD-Recorder	System
⊙ No Disc	
📅 Timer Rec.	VCR ▶
⚙ Setup	Set Top Box Control ▶
	Video Input : AV 1 ▶
	DVD EP Mode Time : 6 Hours ▶
	Chapter Creator : Off ▶
	Quick Recording : Off ▶
✧ MOVE ☞ ENTER ↻ RETURN ▥ EXIT	

42 - English

4 Press the ▲▼ buttons to select Set Top Box Control, then press the **ENTER** or ▶ button. Set Top Box Control menu will be displayed.

DVD-Recorder	Set Top Box Control
⊙ No Disc	
📅 Timer Rec.	Brand Code : 0000 ▶
⚙ Setup	Connection : CH3 ▶
	CH Digit Lock : Off ▶
	Mode for SET button : Off ▶
	Control : Off ▶
	Set Top Box Test ▶
✧ MOVE ☞ ENTER ↻ RETURN ▥ EXIT	
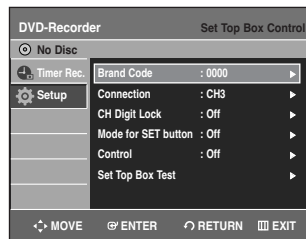
5 Press the ▲▼ buttons to select the sub menu(**Brand Code**,**Connection**, **CH Digit Lock**, **Mode for SET button**, **Control and Set Top Box Test**), then press the **ENTER** or ▶ button.

Brand Code
Enter the brand code of your cable box or satellite receiver using the number buttons, then press the **ENTER** button. (See "Cable Box/Satellite Receiver Brand Code Table" on pages 101~103.)

DVD-Recorder	Set Top Box Control
⊙ No Disc	
📅 Timer Rec.	
⚙ Setup	Enter the brand code of your set top box.
	0 0 0 0
✧ MOVE ☞ ENTER ↻ RETURN ▥ EXIT	
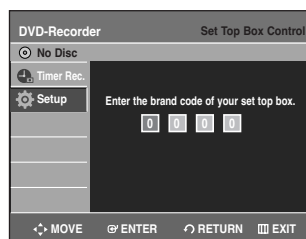
Connection
Select the sub item (**CH3**, **CH4**, **AV1** or **AV2**) using the ▲▼ buttons, then press the **ENTER** button.

DVD-Recorder	Set Top Box Control
⊙ No Disc	
📅 Timer Rec.	Brand Code : 0000 ▶
⚙ Setup	Connection CH3
	CH Digit Lock CH4
	Mode for SET button AV1
	Control AV2
	Set Top Box Test ▶
✧ MOVE ☞ ENTER ↻ RETURN ▥ EXIT	
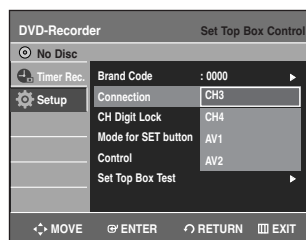
If you connect your cable box or satellite receiver to the recorder's audio/video input. (page16)
• **AV1** : Select this when the cable box or satellite receiver is connected to the DVD recorder's AV 1 IN jacks.
• **AV2** : Select this when the cable box or satellite receiver is connected to the DVD recorder's AV 2 IN jacks.
If you connect your cable box or satellite receiver to the recorder's antenna input. (page17)
• **CH3** or **CH4** : Select the output channel from CH3 or CH4 when the cable box or satellite receiver is connected to the DVD recorder's VHF/UHF IN jack.

✎ ■ See the instruction supplied with your cable box to confirm the cable box's antenna output channel.
Note

System Setup

CH Digit Lock

Select the sub item(**Off** or **Lock to two digits**) using the ▲▼ buttons, then press the **ENTER** button.

• **Off** : Select this when your cable box or satellite receiver only accepts a three or more digit channel numbers. Normally select this.

• **Lock to two digits** : Select this when your cable box or satellite receiver only accepts a two digit channel number.

DVD-Recorder		Set Top Box Control
⊙ No Disc		
Timer Rec.	Brand Code	: 0000 ▶
Setup	Connection	: CH3 ▶
	CH Digit Lock	Off
	Mode for SET button	Lock to two digits
	Control	: Off ▶
	Set Top Box Test	▶
◈ MOVE	⏎ ENTER	↻ RETURN ▥ EXIT

Mode for SET button

Some Set-top boxes require you to press SET after pressing the channel number. If your STB operates this way, follow the instructions below to set Mode 1 or 2. Select the sub item(**Off**, **Mode 1** or **Mode 2**) using the ▲▼ buttons, then press the **ENTER** button.

• **Off** : No code is sent when the **SET** button is pressed. Normally select this.

• **Mode 1** or **Mode 2** : Sends the channel number you entered.

DVD-Recorder		Set Top Box Control
⊙ No Disc		
Timer Rec.	Brand Code	: 0000 ▶
Setup	Connection	: CH3 ▶
	CH Digit Lock	: Off ▶
	Mode for SET button	Off
	Control	Mode 1
	Set Top Box Test	Mode 2
◈ MOVE	⏎ ENTER	↻ RETURN ▥ EXIT
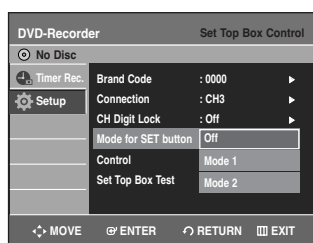
✎ **Note**
■ If "Mode 1" does not work, try "Mode 2."
■ If your cable box or satellite receiver does not respond to either setting, contact the manufacturer of the cable box or satellite receiver.

Control

Select the sub item(**Off** or **On**) using the ▲▼ buttons, then press the **ENTER** button.

• **Off** : Turns off the cable box or satellite receiver control function.
Select this if you do not want to use the supplied set top box controller (IR Blaster).

• **On** : Turns on the cable box or satellite receiver control function.

DVD-Recorder		Set Top Box Control
⊙ No Disc		
Timer Rec.	Brand Code	: 0000 ▶
Setup	Connection	: CH3 ▶
	CH Digit Lock	: Off ▶
	Mode for SET button	: Off ▶
	Control	Off
	Set Top Box Test	On
◈ MOVE	⏎ ENTER	↻ RETURN ▥ EXIT
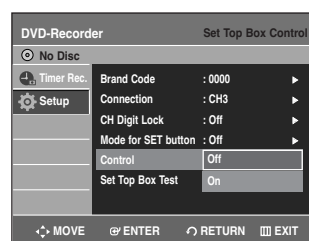
Set Top Box Test

Select Set Top Box Test using the ▲▼ buttons, then press the **ENTER** or ◀ ▶ button. System menu will be displayed.

DVD-Recorder	Set Top Box Control
⊙ No Disc	
Timer Rec.	
Setup	Is your Set Top Box now tuned to channel 28?
	Yes No
◈ MOVE ⏎ ENTER ↻ RETURN ▥ EXIT	
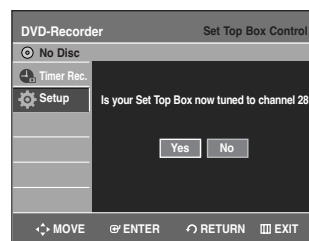
✎ **Note**
■ If you cannot get the recorder to control your cable box/satellite receiver, check the connection and position of the IR Blaster cable.(pages 16~17) If your cable box or satellite receiver still does not operate with this recorder, contact your cable company to see if they can provide you with a compatible cable box or satellite receiver.

System Setup

English **- 43**

Video Input

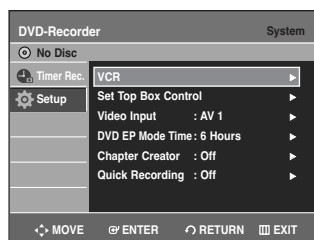You can watch video from an external component through the AV 1(Composite) or S-video input jacks.

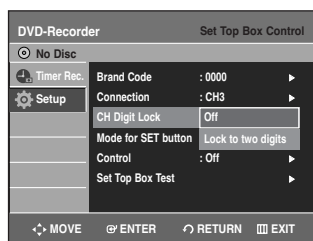**1** With the unit in Stop mode/No Disc mode, press the **MENU** button.

2 Press the ▲▼ buttons to select **Setup**, then press the **ENTER** or ▶ button.

```
DVD-Recorder                          Setup
⊙ No Disc
⏱ Timer Rec.   System                      ▶
⚙ Setup        Clock Set                   ▶
               Channel Set                 ▶
               Language                    ▶
               Audio                       ▶
               Video                       ▶
               Parental Control ☞          ▶

  ✥ MOVE    ☞ ENTER    ↻ RETURN    ▥ EXIT
```

3 Press the ▲▼ buttons to select **System**, then press the **ENTER** or ▶ button.

```
DVD-Recorder                         System
⊙ No Disc
⏱ Timer Rec.   VCR                         ▶
⚙ Setup        Video Input     : AV 1      ▶
               DVD EP Mode Time : 6 Hours   ▶
               Chapter Creator  : Off       ▶
               Quick Recording  : Off       ▶


  ✥ MOVE    ☞ ENTER    ↻ RETURN    ▥ EXIT
```

4 Press the ▲▼ buttons to select **Video Input**, then press the **ENTER** or ▶ button.

```
DVD-Recorder                         System
⊙ No Disc
⏱ Timer Rec.   VCR                         ▶
⚙ Setup        Video Input      AV 1
               DVD EP Mode Time  S-Video
               Chapter Creator  : Off       ▶
               Quick Recording  : Off       ▶


  ✥ MOVE    ☞ ENTER    ↻ RETURN    ▥ EXIT
```
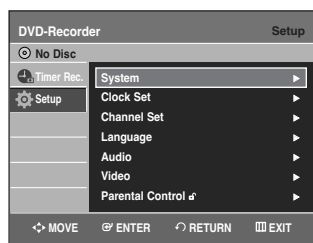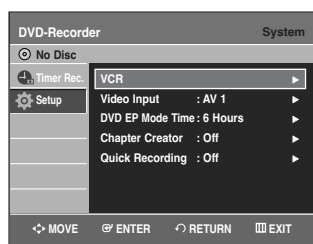
5 Press the ▲▼ buttons to select **AV 1** or **S-Video**, then press the **ENTER** or ▶ button.

System Setup

DVD EP Mode Time

You can set the EP(Extended Play)mode's time setting to 6 or 8 hours.

1 With the unit in Stop mode/No Disc mode, press the **MENU** button.

2 Press the ▲▼ buttons to select **Setup**, then press the **ENTER** or ▶ button.

```
DVD-Recorder                          Setup
⊙ No Disc
⏱ Timer Rec.   System                      ▶
⚙ Setup        Clock Set                   ▶
               Channel Set                 ▶
               Language                    ▶
               Audio                       ▶
               Video                       ▶
               Parental Control ☞          ▶

  ✥ MOVE    ☞ ENTER    ↻ RETURN    ▥ EXIT
```

3 Press the ▲▼ buttons to select **System**, then press the **ENTER** or ▶ button.

4 Press the ▲▼ buttons to select **DVD EP Mode Time**, then press the **ENTER** or ▶ button.

```
DVD-Recorder                         System
⊙ No Disc
⏱ Timer Rec.   VCR                         ▶
⚙ Setup        Video Input     : AV 1      ▶
               DVD EP Mode Time  6 Hours
               Chapter Creator   8 Hours
               Quick Recording  : Off       ▶


  ✥ MOVE    ☞ ENTER    ↻ RETURN    ▥ EXIT
```
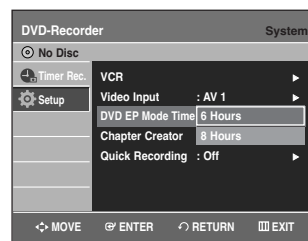
5 Press the ▲▼ buttons to select **6 Hours** or **8 Hours**, then press the **ENTER** or ▶ button.

Automatic Chapter Creator

A DVD-Video consists of 'Titles' and 'Chapters'.
When you record one program, it makes one Title.
If you use this function, the Title will be divided into Chapters.

DVD-RW   DVD-R
(V mode)

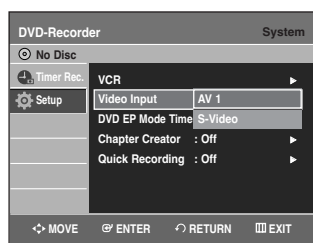**1** With the unit in Stop mode/No Disc mode, press the **MENU** button.

2 Press the ▲▼ buttons to select **Setup**, then press the **ENTER** or ► button.

DVD-Recorder		Setup
⊙ DVD-RW(V)		
Title List	System	►
Disc Manager	Clock Set	►
Timer Rec.	Channel Set	►
	Language	►
Setup	Audio	►
Copy	Video	►
	Parental Control 🔒	►
↔ MOVE	☞ ENTER ↩ RETURN	▥ EXIT

3 Press the ▲▼ buttons to select **System**, then press the **ENTER** or ► button.

4 Press the ▲▼ buttons to select **Chapter Creator**, then press the **ENTER** or ► button.
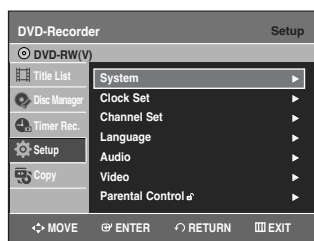
DVD-Recorder		System
⊙ DVD-RW(V)		
Title List	VCR	►
Disc Manager	Video Input : AV 1	►
Timer Rec.	DVD EP Mode Time : 6 Hours	►
Setup	Chapter Creator Off	
Copy	Quick Recording On	
↔ MOVE	☞ ENTER ↩ RETURN	▥ EXIT

5 Press the ▲▼ buttons to select **On**, then press the **ENTER** or ► button.
Press the **MENU** button to exit the menu.

6 Set the recording speed by pressing the **REC SPEED** button on the remote (see page 65 for more information on recording speeds).

7 Press the **REC** button to start recording.
The message "Do you want to create the chapter menu after this recording?" is displayed.

Do you want to create the chapter menu
after this recording?

Yes   No

8 Press the ◄ ► buttons to select **Yes** and press the **ENTER** button and recording begins.
In XP and SP mode, you must record at least 5 minutes to create a chapter. In LP and EP mode, 15 minutes.

9 Press the **STOP** button to stop recording.

10 To display the created titles, finalize the disc (see pages 93~94) and then press the **TITLE MENU** button. The title menu will be displayed.

	1/1
JAN/01/2006 12:00 AM CH1	JAN/01/2006 12:30 AM CH1
JAN/01/2006 01:00 AM CH1	JAN/01/2006 01:30 AM CH1
Previous Top	Next

11 To display the created chapters, select the desired Title and then press the **DISC MENU** button. The chapter menu for the selected Title will be displayed.

✤ CHAPTER		1/1
1	2	3
Previous	Top	Next
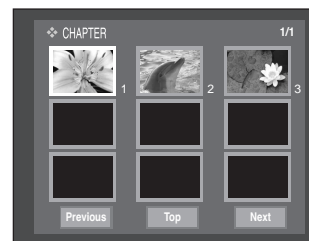
Note
■ On DVD-RW discs, additional chapters and titles can be added to a finalized disc by unfinalizing and recording again.On DVD-R discs, once finalized, no additional chapters or titles can be recorded.

CAUTION
■ The Automatic Chapter Creator function does not work during Timer Recording or when you turn the power off.
■ DVD-R discs cannot be unfinalized.

System Setup

Quick Recording

It takes about 10 seconds for a disc to load (initialize) every time you turn on the unit. To bypass this initialization process, you can set the Quick Recording feature to On. This enables you to record immediately without having to wait for the disc to load.

1 With the unit in Stop mode/No Disc mode, press the **MENU** button.

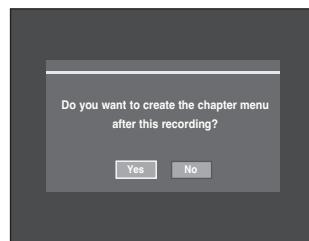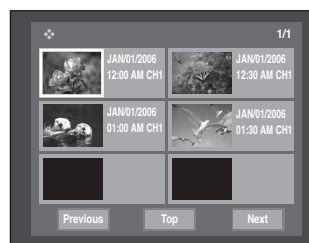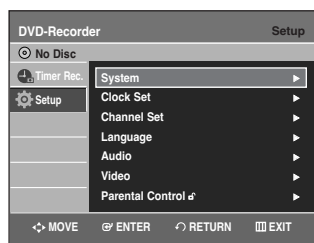**2** Press the ▲▼ buttons to select **Setup**, then press the **ENTER** or ▶ button.

```
DVD-Recorder                          Setup
⊙ No Disc
⊕ Timer Rec.   System                      ▶
⚙ Setup        Clock Set                   ▶
               Channel Set                 ▶
               Language                    ▶
               Audio                       ▶
               Video                       ▶
               Parental Control ⏎          ▶

   ✧ MOVE      ☞ ENTER    ↩ RETURN    ▯▯▯ EXIT
```

3 Press the ▲▼ buttons to select **System**, then press the **ENTER** or ▶ button.

```
DVD-Recorder                          System
⊙ No Disc
⊕ Timer Rec.   VCR                         ▶
⚙ Setup        Video Input      : AV 1     ▶
               DVD EP Mode Time : 6 Hours   ▶
               Chapter Creator  : Off       ▶
               Quick Recording  : Off       ▶

   ✧ MOVE      ☞ ENTER    ↩ RETURN    ▯▯▯ EXIT
```

4 Press the ▲▼ buttons to select **Quick Recording**, then press the **ENTER** or ▶ button.

```
DVD-Recorder                          System
⊙ No Disc
⊕ Timer Rec.   VCR                         ▶
⚙ Setup        Video Input      : AV 1     ▶
               DVD EP Mode Time : 6 Hours   ▶
               Chapter Creator  : Off       ▶
               Quick Recording   Off
                                  On

   ✧ MOVE      ☞ ENTER    ↩ RETURN    ▯▯▯ EXIT
```

5 Press the ▲▼ buttons to select **On**, then press the **ENTER** or ▶ button.

✎

Note
- The Quick Recording is set to Off as default.
- If this function is set to on, power consumption will be increased when the unit is powered off.

46 - English

Playback

This section introduces basic functions of playback by disc type.

DOLBY DIGITAL	**dts**	**DIGITAL SOUND**
Dolby Digital	DTS	Digital Audio
DivX VIDEO	**STEREO**	**NTSC**
DivX	Stereo	NTSC broadcast system in U.S.A, Canada, Korea, Japan,etc.

MP3

Before Playing

Read the following information before playing a disc.

Region code (DVD-Video only)

Both the DVD Recorder & VCR and the discs are coded by region. These regional codes must match in order for the disc to play. If the codes do not match, the disc will not play. The Region Number for this DVD Recorder & VCR is described on the rear panel of the DVD Recorder & VCR.

Disc types that can be played

Disc Types	Disc Logo content	Recorded	Disc Shape or minute.	Max. Playing Time or minute
DVD-VIDEO	**DVD** VIDEO	VIDEO AUDIO	Single sided(5")	240
			Double sided(5")	480
			Single sided(3.5")	80
			Double sided(3.5")	160
AUDIO-CD	**COMPACT DIGITAL AUDIO**	AUDIO	Single sided(5")	74
			Single sided(3.5")	20
JPEG		JPEG Images	Single sided(5")	-
			Single sided(3.5")	-
MP3		MP3 Audio	Single sided(5")	-
			Single sided(3.5")	-
MPEG4		MPEG4 Movie	Single sided(5")	-
			Single sided(3.5")	-
DVD-RAM	**DVD** RAM	VIDEO AUDIO	Single sided(5") (4.7GB)	1 hr (XP: Excellent Quality)
				2 hrs (SP: Standard Quality)
				4 hrs (LP: Long Playback)
				6 hrs or 8 hrs (EP:Extended)
			Double sided(5") (9.4GB)	2 hrs (XP: Excellent Quality)
				4 hrs (SP: Standard Quality)
				8 hrs (LP: Long Playback)
				12 or 16 hrs (EP:Extended)
DVD-RW	**DVD** RW	VIDEO AUDIO	5" (4.7GB)	1 hr (XP: Excellent Quality)
				2 hrs (SP: Standard Quality)
				4 hrs (LP: Long Playback)
				6 or 8 hrs (EP:Extended)
DVD-R	**DVD** R	VIDEO AUDIO	Single layer(5") (4.7GB)	1 hr (XP: Excellent Quality)
				2 hrs (SP: Standard Quality)
				4 hrs (LP: Long Playback)
				6 or 8 hrs (EP:Extended)
			Dual layer(5") (8.5GB)	2 hrs (XP: Excellent Quality)
				4 hrs (SP: Standard Quality)
				8 hrs (LP: Long Playback)
				11 or 15 hrs (EP:Extended)
DVD+RW	**RW** DVD+ReWritable	VIDEO AUDIO	5" (4.7GB)	1 hr (XP: Excellent Quality)
				2 hrs (SP: Standard Quality)
				4 hrs (LP: Long Playback)
				6 or 8 hrs (EP:Extended)
DVD+R	**RW** DVD+R	VIDEO AUDIO	Single layer(5") (4.7GB)	1 hrs (XP: Excellent Quality)
				2 hrs (SP: Standard Quality)
				4 hrs (LP: Long Playback)
				6 or 8 hrs (EP:Extended)
			Dual layer(5") (8.5GB)	2 hrs (XP: Excellent Quality)
				4 hrs (SP: Standard Quality)
				8 hrs (LP: Long Playback)
				11 or 15 hrs (EP:Extended)

Playback

English - 47

Discs that cannot be played

• DVD-Video with a region number other than "1" or "ALL"
• 3.9 GB DVD-R Disc for Authoring.
• A DVD±R/DVD-RW(V) disc which has been recorded and not finalized in a different manufacturer's recorder.
• PAL discs
• DVD-ROM/PD/MV-Disc, etc.
• Video CD/CVD/SVCD/CD-ROM/CDV/CD-G/CD-I

Note

■ This DVD Recorder & VCR can only operate with discs that are compatible with DVD-RAM Standard Version 2.0.

■ Playback and/or recording may not work for some types of discs or when specific operations, such as angle change and aspect ratio adjustment, are being performed. Information about the disc is written in detail on the box. Please refer to this if necessary.

■ Do not allow the disc to become dirty or scratched. Fingerprints, dirt, dust, scratches and deposits of cigarette smoke on the recording surface may make it impossible to use the disc for recording.

■ DVD-RAM/±RW/±R discs may not be able to play on some DVD players, depending on the player, disc and the condition of the recording.

■ Discs with PAL programs recorded on them cannot be played using this product.

Playing a Disc

1 Press the **OPEN/CLOSE** button.

2 Place a disc gently into the tray with the disc's label facing up.

3 Press **OPEN/CLOSE** button to close the disc tray.
• Your DVD Recorder & VCR closes the disc tray and plays the disc automatically.
• The recorder does not play discs automatically after being powered on initially.
• When the recorder is powered on and a disc is in the tray, the unit will be activated and wait in stop status. Press the **PLAY** button to start playback.

4 Press the **STOP** button to stop playback.

Note

■ When you stop playing the disc, the DVD Recorder & VCR remembers where you stopped. When you press **PLAY** button again, it will pick up where you left off. (unless the disc is removed or the DVD Recorder & VCR is unplugged, or if you press the **STOP** button twice.) This function is only applicable to DVD-VIDEO, DVD-RAM, DVD±RW, DVD±R or Audio CDs (CD-DA).

CAUTION

■ Do not move your DVD Recorder & VCR while playing, as this may cause damage to the disc.

■ Make sure to press the **OPEN/CLOSE** button to open or close the disc tray.

■ Do not push the disc tray while it is being opened or closed, as this may cause a product malfunction.

■ Do not place foreign materials on or in the disc tray.

■ Some functions may perform differently or be disabled depending on the disc type. If this occurs, refer to the instructions written on the disc case.

■ Be especially careful that children's fingers are not caught between the disc tray and the tray chassis when it closes.

■ After turning power on, it will take a few seconds until the DVD Recorder & VCR operates.

Playback

48 - English

Using the Disc Menu and Title Menu

Some discs contain a dedicated menu system that allows you to select special functions for title, chapters, audio track, subtitles, film previews, information on characters, etc.

For DVD-VIDEO disc

1 Press the **DISC MENU** button to enter the disc menu of the disc.

- Move to the setup menu related to playback operation.
- You can select audio language and subtitle etc., provided by the disc.

2 Press the **TITLE MENU** button to move to the title menu of the disc.
- Use this button if the disc contains more than one title. Some discs may not support the title menu functionality.

For DVD-RAM/DVD±RW/DVD±R disc

1 Press the **TITLE LIST** button to display title list.

✎ Note

■ Title List : The Title List is simply a list of titles on a disc. If a title is deleted, that title cannot be played again.

■ Playlist (DVD-RAM/-RW(VR)) :
A playlist is a custom-made list of titles. When one playlist is played, only the titles within the playlist will play and then stop. Even if that playlist is deleted, the original recording will not be deleted.

Using the Search & Skip Functions

Searching through a Chapter or Track

During playback, press the **SEARCH** ◄◄ or ►► button on the remote control. Each time you press the **SEARCH** button, the playback speed will change as follows.

DVD-VIDEO/ DVD-RAM/DVD±RW DVD±R	►► Fast 1/◄◄ Fast 1→ ►► Fast 2/◄◄ Fast 2→ ►► Fast 3/◄◄ Fast 3→ ►► Fast 4/◄◄ Fast 4→ ►► Fast 5/◄◄ Fast 5→ ►► Fast 6/◄◄ Fast 6
MPEG4	►► Fast 1→ ►► Fast 2→ ►► Fast 3
AUDIO CD(CD-DA)	→ X2 → X4 → X8 ┐

- You can scan the program in reverse order.
To return to normal speed playback, press the ►II button.

✎ Note

■ No sound is heard during Scan(Search) mode, except on CDs (CD-DA). (You can hear the sound during forward search (Fast 1).) No sound is heard during scanning in all MPEG4 modes. Depending on the disc type, the sound quality may lower during Fast 1 mode.

Skipping Chapters or Tracks

During playback, press the I◄◄ or ►►I button on the remote control.

· **If you press the I◄◄ button**
If you press the I◄◄ button, it moves to the beginning of the chapter, track or marker(DVD-RAM, DVD-RW(VR mode)). Pressing the button once again within 3 seconds returns to the beginning of the previous chapter, track or marker(DVD-RAM, DVD-RW(VR mode)).

· **If you press the ►►I button**
If you press the ►►I button, it moves to the next chapter, track or marker(DVD-RAM,DVD-RW (VR mode))

Skipping ahead 30 seconds

During the playback, press **F.ADV/SKIP** button to skip ahead exactly 30 seconds.

Playback

English **- 49**

Slow Motion Play/
Step Motion Play

Slow Motion Play (DVD-VIDEO / DVD-RAM / DVD±RW / DVD±R)

DVD-VIDEO DVD-RAM DVD-RW DVD-R DVD+RW DVD+R MPEG4

During pause mode, press the **SEARCH ◄◄** or **►►** button on the remote control for more than 1 second.

- Each time you press the **►►** button :
  I► Slow 1 → **I►** Slow 2 → **I►** Slow 3

- Each time you press the **◄◄** button :
  ◄I Slow 1 → **◄I** Slow 2 → **◄I** Slow 3

To return to normal speed playback, press the **►II** button.

✎ ■ Slow motion operates only in the forward
Note   direction on MPEG 4 discs.

Step Motion Play (DVD-VIDEO / DVD-RAM / DVD±RW / DVD±R)

DVD-VIDEO DVD-RAM DVD-RW DVD-R DVD+RW DVD+R MPEG4

During pause mode, press the **F.ADV** button on the remote control.
- Each time the button is pressed, a new frame will appear.

To return to normal speed playback, press the **►II** button.

✎ ■ No sound is heard during Step or Slow mode.
Note ■ Step motion operates only in the forward
     direction on MPEG 4 discs.

About ANYKEY

The **ANYKEY** functions allows you to easily search for a desired scene by accessing title, chapter or time.
You can also change the subtitle and audio settings and set some features including Repeat, Angle and Zoom.

Moving to a scene directly using the ANYKEY

- If you want to move to a title or a chapter to find a desired scene.

DVD-VIDEO DVD-RAM DVD-RW DVD-R DVD+RW DVD+R

1 Press the **ANYKEY** button during playback.

2 Press the ▲▼ buttons to select **Title, Chapter**.

DVD-VIDEO
Title	1/2
Chapter	1/28
Time	00:00:01
Subtitle	ENG
Audio	ENG DD D 5.1CH
Repeat	Off
Angle	1/1
Zoom	Off

↕ MOVE ◄► CHANGE

3 Press the **◄ ►** buttons or number (**0~9**) buttons to select the desired scene.
Then, press the **ENTER** button.

Playback

• If you want to move to a desired time to help you find a scene.

1 Press the **ANYKEY** button during playback.

2 Press the ▲▼ buttons to select **Time**.

DVD-VIDEO
Title 1/2
Chapter 1/28
Time 00:00:01
Subtitle ENG
Audio ENG DD D 5.1CH
Repeat Off
Angle 1/1
Zoom Off
‡ MOVE 0~9 NUMBER

3 Enter the time in the sequence of hours, minutes, and seconds using the number buttons, then press the **ENTER** button.

Note
■ This may not work for some discs. When an Audio CD(CD-DA) or an MP3 disc is inserted, depending on the disc type, the information display may not be appear.
■ The Time Search function does not operate in some discs.
■ To make the screen disappear, press the **ANYKEY** button again.

Repeat Playback

Playing Repeatedly(Repeat Playback)

DVD-VIDEO DVD-RAM DVD-RW DVD-R DVD+RW DVD+R

1 Press the **ANYKEY** button during playback.

2 Press the ▲▼ buttons to select **Repeat**.

DVD-VIDEO
Title 1/2
Chapter 1/28
Time 00:00:01
Subtitle ENG
Audio ENG DD D 5.1CH
Repeat Off
Angle 1/1
Zoom Off
‡ MOVE ◄► CHANGE

3 Select repeat mode using ◄► button.
Press the **ENTER** button.
• To make the screen disappear, press the **ANYKEY** or **RETURN** button.

Note
■ DVD-RAM/DVD-RW(VR mode), unfinalized DVD±R and unfinalized DVD-RW (Video mode) do not repeat a chapter.

## Playing a Certain section Repeatedly (A-B Repeat Playback)

DVD-VIDEO DVD-RAM DVD-RW DVD-R DVD+RW DVD+R

1 Press the **ANYKEY** button during playback.

2 Press the ▲▼ buttons to select **Repeat**.

DVD-VIDEO
Title 1/2
Chapter 1/28
Time 00:00:01
Subtitle ENG
Audio ENG DD D 5.1CH
Repeat Off
Angle 1/1
Zoom Off
‡ MOVE ◄► CHANGE

3 Press the ◄► button to select **A-B**, then press the **ENTER** button.

4 Press the **ENTER** button at the point where you want repeat play to start (A) and press it again at the point where you want the repeat play to stop (B).
Repeat playback of the A-B section starts.
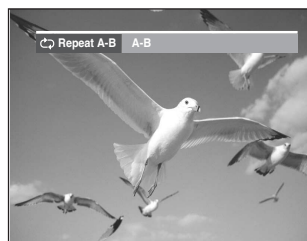
↻ Repeat A-B   A-B

- To return to normal playback -

5 Press the **CANCEL** button to return to normal playback.

Note
■ If you set point (B) before five seconds has lapsed, the prohibition mark (⊘) will appear.
■ CDs do not support the Repeat A-B function.

Playback

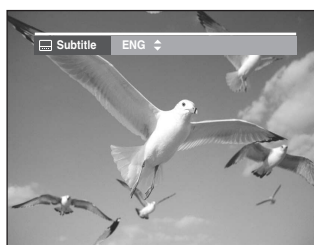English **- 51**

Selecting the Subtitle & Audio Language

Selecting the SUBTITLE language

Subtitle languages may not work depending on the disc type. This is only available during playback.

Using the SUBTITLE button

1 Press the **SUBTITLE** button during playback.

2 Press the ▲▼ buttons to select the desired subtitle language.
• To make the screen disappear, press the **CANCEL** or **RETURN** button.

Using the ANYKEY button

1 Press the **ANYKEY** button during playback.

2 Press the ▲▼ buttons to select **Subtitle**, then press the ◄ ► buttons to select the desired subtitle language.

Note
■ The subtitle display may be different depending on the disc type.
■ If the subtitles overlap, disable the caption function on your TV.
■ Some discs allow you to select the language for the disc menu only.

Selecting the Audio language

Audio languages may not work depending on the disc type. This is only available during playback.

Using the AUDIO button

1 Press the **AUDIO** button during playback.
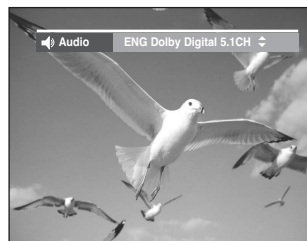
2 Press the **AUDIO** or ▲▼ buttons to select the desired audio language.

Using the ANYKEY button

1 Press the **ANYKEY** button during playback.

2 Press the ▲▼ buttons to select **Audio**, then press the ◄ ► buttons to select the desired audio language.

Note
■ Audio languages may be different because they are disc-specific.
■ Some discs allow you to select the audio language for the disc menu only.

52 - English

Changing the Camera Angle

If a DVD-VIDEO contains multiple angles of a particular scene, you can use the Angle function. If the disc contains multiple angles, **ANGLE** appears on the screen.

Using the ANGLE button

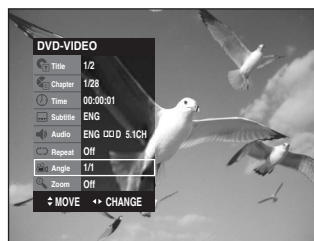**1** Press the **ANGLE** button, during playback.

2 Press the ▲▼ button to select the desired angle.

Using the ANYKEY button

1 Press the **ANYKEY** button during playback.

2 Press the ▲▼ buttons to select **Angle**, then press the ◄ ► buttons or number (0~9) buttons to select the desired angle scene.

DVD-VIDEO

Title	1/2
Chapter	1/28
Time	00:00:01
Subtitle	ENG
Audio	ENG □□D 5.1CH
Repeat	Off
Angle	1/1
Zoom	Off

⇕ MOVE ↔ CHANGE

Note
■ This function is disc-dependent, and may not work all DVDs.
■ This function does not work when a DVD has not been recorded with a multi-camera angle system.
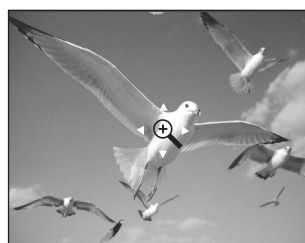
Zooming-In

1 Press the **ANYKEY** button during playback.

DVD-VIDEO

Title	1/2
Chapter	1/28
Time	00:00:01
Subtitle	ENG
Audio	ENG □□D 5.1CH
Repeat	Off
Angle	1/1
Zoom	Off

⇕ MOVE ↔ CHANGE

2 Press the ▲▼ buttons to select **Zoom**, then press the **ENTER** button. (🔍) will be displayed.

3 Press ▲▼, ◄ ► buttons to move to the area you want to enlarge.

4 Press the **ENTER** button.
Each time the **ENTER** button is pressed, the picture is enlarged up to 4X (four times the normal size).
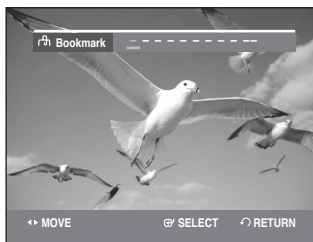
| DVD-VIDEO/ DVD-RAM/DVD±RW/ DVD±R | normal size → 2X → 4X → 2X → normal size |

Playback

English **- 53**

Using the Bookmarks
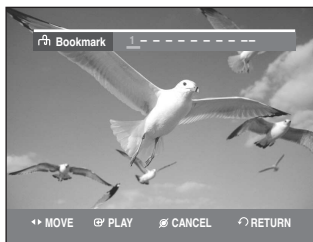
DVD-VIDEO DVD-RW DVD-R DVD+RW DVD+R
(V mode)

Set marks at scenes you want to see again so that you can start playback from the marked position.

1 Press the **MARKER** button during playback.

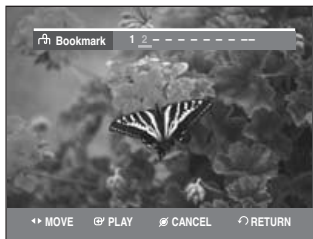**2** Press the **ENTER** button when the desired scene appears.
• The number 1 is displayed and the scene is memorized.
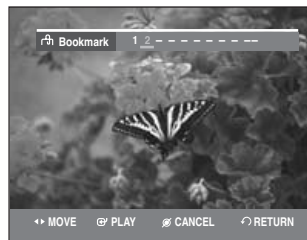

3 Press the ◀ ▶ button to move to the next position.

4 Press the **ENTER** button again when the desired scene appears.
• The number 2 is displayed and the scene is memorized. Repeat above to bookmark other positions. You can bookmark up to 10 scenes.
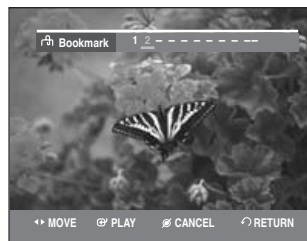

Playing back a Bookmark

1 Press the **MARKER** button.

2 Press the ◀ ▶ buttons to select a bookmarked scene.
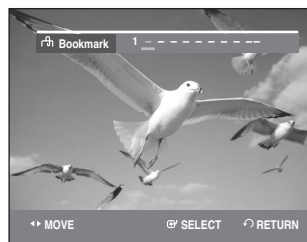

3 Press the **ENTER** or ▶II button to start playing from the selected scene.

Clearing a Bookmark

1 Press the **MARKER** button.

2 Press the ◀ ▶ buttons to select a bookmarked scene.

3 Press the **CANCEL** button to delete the selected bookmark.

✎ ■ When the disc tray is opened and then closed, bookmarks will disappear.
Note

Playback