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Function Setup
Others
Español

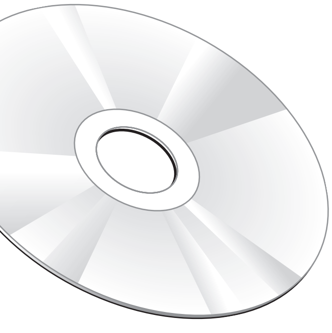
SYLVANIA

Digital Video Disc Recorder

Owner's Manual

ZC320SL8B

INSTRUCCIONES EN ESPAÑOL INCLUIDAS



SYLVANIA
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PROGRESSIVE SCAN
DOLBY DIGITAL RECORDING

THIS UNIT HAS NO TUNER SYSTEM, YOU MUST CONNECT TO EXTERNAL TUNER.

IF YOU NEED ADDITIONAL ASSISTANCE WITH SETUP OR OPERATING AFTER READING OWNER'S MANUAL, PLEASE CALL TOLL FREE **1-800-968-3429**, OR VISIT OUR WEB SITE AT **http://www.SylvaniaConsumerElectronics.com**

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PRECAUTIONS

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

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

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

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

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

The caution marking is located on the rear of the cabinet.

Laser Safety

This unit employs a laser. Only a qualified service person should remove the cover or attempt to service this device, due to possible eye injury.

CAUTION: USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.
CAUTION: VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCK DEFEATED. DO NOT STARE INTO BEAM.
LOCATION: INSIDE, NEAR THE DECK MECHANISM.

FCC WARNING- This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

RADIO-TV INTERFERENCE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to 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:

1) Reorient or relocate the receiving antenna.
2) Increase the separation between the equipment and receiver.
3) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4) Consult the dealer or an experienced radio/TV technician for help.

This Class B digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

ATTENTION: POUR ÉVITER LES CHOCS ÉLECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU’AU FOND.

A NOTE ABOUT RECYCLING

This product’s packaging materials are recyclable and can be reused. Please dispose of any materials in accordance with your local recycling regulations.
Batteries should never be thrown away or incinerated but disposed of in accordance with your local regulations concerning chemical wastes.

Make your contribution to the environment!!!

- Used up batteries do not belong in the dust bin.
- You can dispose of them at a collection point for used up batteries or special waste.
  Contact your council for details.

For Customer Use:

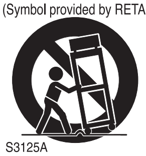
Read carefully the information located at the back of this unit and enter below the Model No. and Serial No. Retain this information for future reference.

Model No. ______________________
Serial No. ______________________

Important Safeguards

1. Read Instructions - All the safety and operating instructions should be read before the appliance is operated.
2. Retain Instructions- The safety and operating instructions should be retained for future reference.
3. Heed Warnings - All warnings on the appliance and in the operating instructions should be adhered to.
4. Follow Instructions - All operating and use instructions should be followed.
5. Cleaning - Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
   EXCEPTION: A product that is meant for uninterrupted service and, that for some specific reason, such as the possibility of the loss of an authorization code for a CATV converter, is not intended to be unplugged by the user for cleaning or any other purpose, may exclude the reference to unplugging the appliance in the cleaning description otherwise required in item 5.
6. Attachments - Do not use attachments not recommended by the product manufacturer as they may cause hazards.
7. Water and Moisture- Do not use this product near water, for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, and the like.
8. Accessories - Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the appliance. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the appliance should follow the manufacturer's instructions and should use a mounting accessory recommended by the manufacturer. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

PORTABLE CART WARNING
(Symbol provided by RETAC)



S3125A

9. Ventilation - Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
10. Power Sources - This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your appliance dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.
11. Grounding or Polarization - This product is equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
12. Power Cord Protection - Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
13. Lightning - For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet. This will prevent damage to the product due to lightning and power-line surges.
14. Power Lines - An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.
15. Overloading - Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.
16. Object and Liquid Entry - Never push objects of any kind into this product through any openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.
17. Servicing - Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
18. Damage Requiring Service - Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
    a. When the power-supply cord or plug is damaged.
    b. If liquid has been spilled, or objects have fallen into the product.
    c. If the product has been exposed to rain or water.
    d. If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
    e. If the product has been dropped or damaged in any way.
    f. When the product exhibits a distinct change in performance this indicates a need for service.
19. Replacement Parts - When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.
20. Safety Check - Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.
21. Heat - This product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

PRECAUTIONS

Installation Location

For safety and optimum performance of this unit:

- Install the unit in a horizontal and stable position. Do not place anything directly on top of the unit. Do not place the unit directly on top of the TV.
- Shield it from direct sunlight and keep it away from devices of intense heat. Avoid dusty or humid places. Avoid places with insufficient ventilation for proper heat dissipation. Do not block the ventilation holes on the sides of the unit. Avoid locations subject to strong vibration or strong magnetic fields.

Avoid the Hazards of Electrical Shock and Fire

- Do not handle the power cord with wet hands.
- Do not pull on the power cord when disconnecting it from AC outlet. Grasp it by the plug.
- If, by accident, water is spilled on this unit, unplug the power cord immediately and take the unit to our Authorized Service Center for servicing.

Moisture Condensation Warning

Moisture condensation may occur inside the unit when it is moved from a cold place to a warm place or after heating a cold room or under conditions of high humidity. Do not use this unit at least for 2 hours until its inside gets dry.

About Copyright

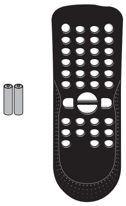
Unauthorized copying, broadcasting, public performance and lending of discs are prohibited.
This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology must be authorized by Macrovision, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision. Reverse engineering or disassembly is prohibited.

Notice for Progressive Scan Output

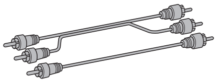
Consumers should note that not all high definition television sets are fully compatible with this product and may cause artifacts to be displayed in the picture. In case of picture problems with 525 progressive scan output, it is recommended that the user switch the connection to the 'standard definition' output. If there are questions regarding your TV set compatibility with this 525p DVD player, please contact our customer service center.

Supplied Accessories

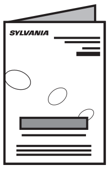
remote control (NB090UD) with batteries (AAx2)



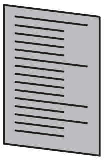
RCA audio/video cables (WPZ0102TM018/WPZ0102LTE01)



owner's manual (1VMN23368)



quick guide (1VMN23370)



PRECAUTIONS

Maintenance

Servicing

- Please refer to relevant topics on “TROUBLESHOOTING” on pages 80-84 before returning the product.
- If this unit becomes inoperative, do not try to correct the problem by yourself. There are no user-serviceable parts inside. Turn off, unplug the power plug and please call our help line mentioned on the front page to locate an Authorized Service Center.

Cleaning the cabinet

- Use a soft cloth slightly moistened with a mild detergent solution. Do not use a solution containing alcohol, spirits, ammonia or abrasive.

Cleaning discs

- When a disc becomes dirty, clean it with a cleaning cloth. Wipe the disc from the center to out. Do not wipe in a circular motion.
- Do not use solvents such as benzine, thinner, commercially available cleaners, detergent, abrasive cleaning agents or antistatic spray intended for analog records.

Cleaning the disc lens

- If this unit still does not perform properly although you refer to the relevant sections and to “TROUBLESHOOTING” in this owner's manual, the laser optical pickup unit may be dirty. Consult your dealer or an Authorized Service Center for inspection and cleaning of the laser optical pickup unit.

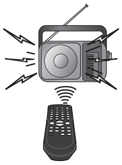
Disc handling

- Handle the discs so that fingerprints and dust do not adhere to the surfaces of the discs.
- Always store the disc in its protective case when it is not used.

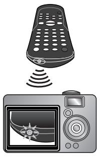
IR signal check

If the remote control does not work properly, you can test if the remote control sends out the infrared signal with AM radio or a digital camera (including built-in camera of cellular phone). It will help to define the cause of malfunction.

- **With an AM radio:**
  Tune an AM radio to a station with no broadcasting. Press a button on remote control toward the radio. Sound will be fluttering when you press any key and the radio receives the signal. This means the remote control is working.



- **With a digital camera (including built-in camera of cellular phone):**
  Direct a digital camera to remote control, press and hold a button on remote control. If infrared light appears through digital camera, the remote control is working.



“Kodak Picture CD COMPATIBLE” is a trademark of Eastman Kodak Company.

DOLBY DIGITAL RECORDING

Manufactured under license from Dolby Laboratories. “Dolby” and the double-D symbol are trademarks of Dolby Laboratories.

Dolby Digital Recording

“Dolby® Digital Recording enables consumers to record high-quality video with stereo sound on recordable DVD discs. The technology, when utilized instead of PCM recording, also saves recordable disc space, allowing for higher video resolution or extended recording time on each DVD. DVDs created using Dolby Digital Recording will play back on all DVD-video players.”
Note: This is true when the players are compatible with actual recordable DVD discs.

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FEATURES

This unit not only plays back DVD and CD but also offers features for you to record on DVD and edit them after that. The following features are offered with this unit.

Recording

This unit is compatible with recording on DVD-RW which is recordable repeatedly and DVD-R which accept the additional recordings until the disc becomes full but not overwritable. You can choose either one for your convenience.

Up to 12 program recording:
You can program the unit to record up to 12 programs within a one-month period. Daily or weekly program recordings are also available.

One-touch timer recording (OTR):
You can easily set a recording time as you prefer. Every time **[REC/OTR]** is pressed during recording, the recording time will be increased by 30 minutes up to 8 hours. The recording automatically stops when the recording time you set is reached.

Automatic chapter mark setting:
Chapter marks will be put on recordings as you set before attempting to record.

Automatic title menu making:
The unit creates title menu automatically when finalizing discs.

Automatic playlist making (VR mode DVD-RW):
The unit creates a playlist automatically after recording.

Automatic title finalizing (Video mode DVD-RW/-R):
You can finalize discs automatically after finishing all timer recordings or at the end of the disc space if you set this in the main menu.

Left channel stereo recording:
This unit can record the sound of the left channel monaural input as left and right channels automatically (the input from the L2 jacks only).

Playback

Theater surround sound in your home:
When connecting the unit to an amplifier or a decoder which is compatible with Dolby Digital, you can experience the theater surround sound from discs with surround sound system.

Quick search for what you want to watch:
You can easily find the part you want to watch using the search function. Search for a desired point on a disc by title, chapter/track or time.

Virtual surround system:
You can enjoy stereophonic space through your existing 2 channel stereo system.

Playing back MP3/JPEG/Kodak Picture CD files:
You can enjoy MP3/JPEG/Kodak Picture CD files which are recorded on CD-RW/-R.

Editing

Deleting titles:
You can delete titles which you do not need anymore.

Setting or clearing chapter marks:
You can set or clear chapter marks on titles.

Deleting parts of titles:
You can delete a specific part of a title.

Dividing or combining titles:
You can divide or combine a title.

Editing title names:
You can change the title name you prefer.

Compatibility

Available for playing back discs on a regular DVD player:
Recorded discs can be played back on regular DVD players, including computer DVD drives compatible with DVD-video playback.

Others

Progressive scan system
Unlike conventional interlace scanning, the progressive scan system provides less flickering and images in higher resolution than that of traditional television signals.

Line through output
When an external device, such as cable/satellite box, is connected to L1 (Rear) jacks of this unit, the signal from the external device can be output even when the power of the unit is off.

Symbols Used in this Owner's Manual

To specify for what disc type each function is, we put the following symbols at the beginning of each item to operate.

* DVD-R recorded in VR format or non compatible recording format are not playable.

Symbol	Description
For Recording, Playing Back, and Editing	
DVD -RW VIDEO MODE	Description refers to DVD-RW in video mode
DVD -RW VR MODE	Description refers to DVD-RW in VR mode
DVD -R VIDEO MODE	Description refers to DVD-R in video mode
For Playback only	
DVD VIDEO	Description refers to DVD-video
CD	Description refers to audio CD
MP3	Description refers to CD-RW/-R with MP3 files
JPEG	Description refers to CD-RW/-R with JPEG files, including Kodak Picture CD files

If you do not find any of the symbols listed above under the function heading, the operation is applicable to all media.

	Discs for Recording, Playing back			
Disc type	**DVD-RW**			**DVD-R**
Logo	DVD RW			DVD R R4.7
Format	Can be formatted in VR or video mode			Automatically formatted in video mode
	Video Mode	**VR Mode**		
Icon	DVD -RW VIDEO MODE	DVD -RW VR MODE		DVD -R VIDEO MODE
Maximum record time	480 min (12cm) 144 min (8cm)	480 min (12cm) 144 min (8cm)		480 min (12cm) 144 min (8cm)
Recordable/playable versions	Ver.1.1,1.2 Ver.1.1/2× CPRM compatible Ver.1.2/4× CPRM compatible			Ver.2.0 Ver.2.0/4× Ver.2.0/8× Ver2.0/16×
Compatibility	Playable on most DVD players. Finalization necessary. (DVD menu will be created)	Playable only on VR mode compatible unit. Finalization recommended.		Playable on most DVD players. Finalization necessary. (DVD menu will be created)
Available Features				
Recording Features				
Record TV programs	✔	✔		✔
Reuse by deleting the current contents	✔	✔		▨
Record 16:9 size pictures	✔	✔		✔
Record copy-once programs	▨	✔*		▨
Create chapters at fixed intervals (auto chapter)	✔	✔		✔
Editing Features		**Playlist**	**Original**	
Scene delete	▨	✔	✔	▨
Edit title name	✔	✔	✔	✔
Create chapters wherever you like (chapter mark)	▨	✔	✔	▨
Divide a title	▨	✔	▨	▨
Combine titles	▨	✔	▨	▨
Hide chapters	▨	▨	▨	▨
Delete a title	✔	✔	✔	✔
Create a playlist	▨	▨	✔	▨
Protect a title	▨	▨	✔	▨

✔ : Available ▨ : Not available

*CPRM compatible disc only.

FEATURES

	Discs for playing back			
Disc Type	**DVD-VIDEO**	**CD-DA**	**CD-RW**	**CD-R**
Logo	DVD VIDEO	COMPACT disc DIGITAL AUDIO	COMPACT disc ReWritable COMPACT disc DIGITAL AUDIO ReWritable	COMPACT disc Recordable COMPACT disc DIGITAL AUDIO Recordable
Icon	DVD VIDEO	CD	CD	CD

	Files for playing back	
Type of title	**MP3**	**JPEG**
Icon	MP3	JPEG
Media	CD-RW/-R	CD-RW/-R

DVD is a trademark of DVD Format/Logo Licensing Corporation.

DVD players with RW COMPATIBLE are capable of playing DVD-RW recorded in VR mode.

- Following discs are recommended for good recording quality and are proven to be compatible with this unit. However, depending on the media condition the unit may not read the disc properly.

Verbatim	DVD-R 8x,	DVD-RW 2x
JVC	DVD-RW 4x	
Maxell	DVD-R 8x/16x	

Performance of any other discs are not guaranteed.

Unplayable Discs

The following discs will not play back on this unit.

- CD-ROM
- Video Single Disc (VSD)
- DVD-audio
- Compact Disc-Interactive (CD-I)
- DVD-ROM
- Unfinalized disc
- DVD contains MP3 or JPEG files
- DVD-R recorded in VR format or non compatible recording format

On the following disc, the sound may not be heard.

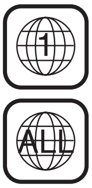
- Super audio CD - Only the sound on the CD layer can be heard. The sound on the high-density super audio CD layer cannot be heard.

Color Systems

DVD is recorded in different color systems throughout the world. The most common color system is NTSC (which is used primarily in the United States and Canada). This unit uses NTSC, so DVD you play back must be recorded in the NTSC system. You cannot play back DVD recorded in other color systems.

Region Codes

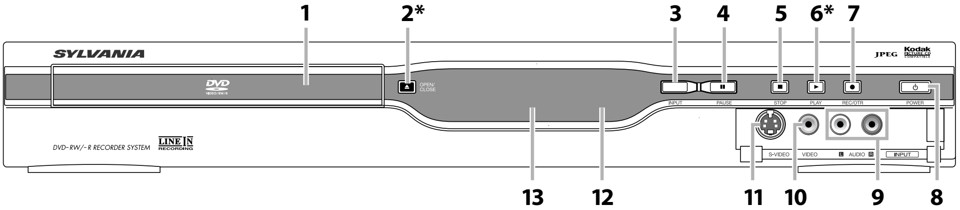
This unit has been designed to play back DVD with region 1. DVD must be labeled for ALL regions or for region 1 in order to play back on the unit. You cannot play back DVD that are labeled for other regions. Look for the symbols on the right on your DVD. If these region symbols do not appear on your DVD, you cannot play back the DVD in this unit.



The number inside the globe refers to region of the world. A DVD labeled for a specific region can only play back on the unit with the same region code.

FUNCTIONAL OVERVIEW

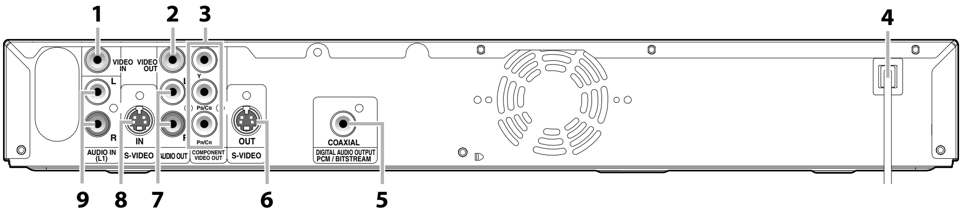
Front Panel


1
2*
3
4
5
6*
7
SYLVANIA
JPEG
Kodak
OPEN/CLOSE
INPUT
PAUSE
STOP
PLAY
REC/OTR
POWER
DVD-RW/-R RECORDER SYSTEM
LINE IN RECORDING
S-VIDEO
VIDEO
L AUDIO R
INPUT
13
12
11
10
9
8

(*) The unit can also be turned on by pressing these buttons.

1. **Disc tray**
   Place a disc when the disc tray is opened.
2. **OPEN/CLOSE ▲ button***
   Press to open or close the disc tray.
3. **INPUT button**
   Press to select the appropriate input.
4. **PAUSE ❚❚ button**
   Press to pause playback or recording.
5. **STOP ■ button**
   Press to stop playback or recording.
6. **PLAY ▶ button***
   Press to start or resume playback.
7. **REC/OTR ● button**
   Press once to start a recording. Press repeatedly to start one-touch timer recording.
8. **POWER ⏻ button**
   Press to turn the unit on and off.
   If timer programmings have been set, press to set the unit in timer-standby mode.
9. **AUDIO input jacks (L2)**
   Use to connect external device with a RCA audio cable.
10. **VIDEO input jack (L2)**
    Use to connect external device with a RCA video cable.
11. **S-VIDEO input jack (L2)**
    Use to connect the S-video output of external device with an S-video cable.
12. **Infrared sensor window**
    Receive signals from your remote control so that you can control the unit from a distance.
13. **Display**
    Refer to “Front Panel Display” on page 14.

Rear Panel


1
2
3
4
VIDEO IN
VIDEO OUT
L
R
Y
PB/CB
PR/CR
AUDIO IN (L1)
S-VIDEO
IN
AUDIO OUT
COMPONENT VIDEO OUT
OUT
S-VIDEO
COAXIAL
DIGITAL AUDIO OUTPUT PCM / BITSTREAM
9
8
7
6
5

1. **VIDEO IN jack (L1)**
   Use to connect external device with a RCA video cable.
2. **VIDEO OUT jack**
   Use to connect a TV monitor, AV receiver or other device with a RCA video cable.
3. **COMPONENT VIDEO OUTPUT jacks**
   Use to connect a TV monitor with component video inputs with a component video cable.
4. **AC Power Cord**
   Connect to a standard AC outlet to supply power to this unit.
5. **COAXIAL DIGITAL AUDIO OUTPUT jack**
   Use to connect an AV receiver, Dolby Digital decoder or other device with a digital audio coaxial input jack with a digital audio coaxial cable.
6. **S-VIDEO OUT jack**
   Use to connect the S-video input of a TV monitor, AV receiver or other device with an S-video cable.
7. **AUDIO OUT jacks**
   Use to connect a TV monitor, AV receiver or other device with a RCA audio cable.
8. **S-VIDEO IN jack (L1)**
   Use to connect the S-video output of external device with an S-video cable.
9. **AUDIO IN jacks (L1)**
   Use to connect external device with a RCA audio cable.

Note

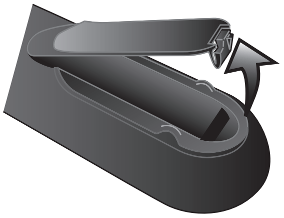
- Do not touch the inner pins of the jacks on the rear panel. Electrostatic discharge may cause permanent damage to the unit.

Remote Control

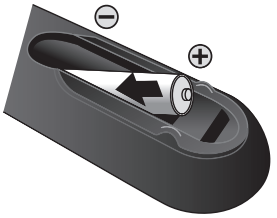
Installing the Batteries in the Remote Control

Install the batteries (AAx2) matching the polarity indicated inside battery compartment of the remote control.

1 **Open the cover.**

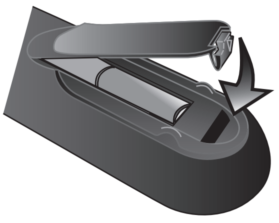


2 **Insert batteries.**



Make sure to match + and - on the batteries to the marks indicated in the battery compartment.

3 **Close the cover.**



Caution:

Never throw batteries into a fire.

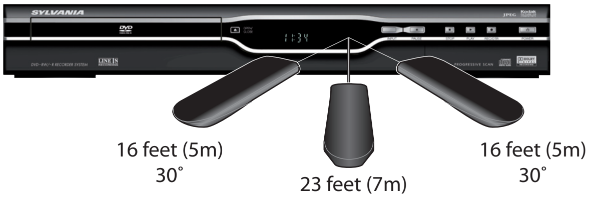
Note:

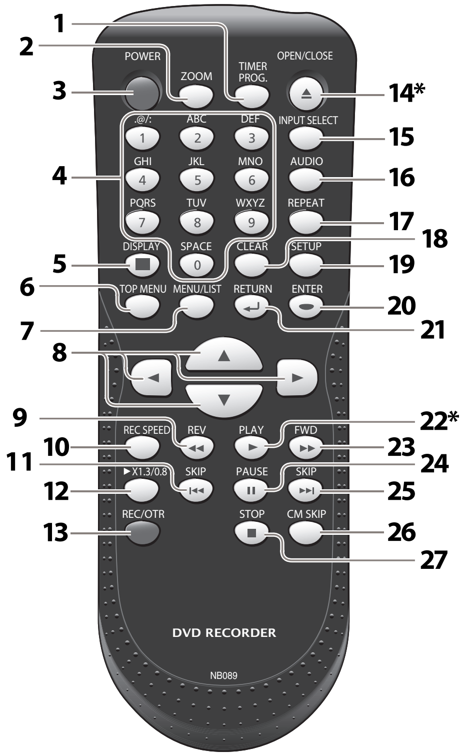
- Be sure to use AA size batteries.
- Dispose of batteries in a designated disposal area.
- Batteries should always be disposed of with the environment in mind. Always dispose of batteries in accordance with applicable laws and regulations.
- If the remote control does not operate correctly, or if the operating range becomes reduced, replace batteries with new ones.
- When necessary to replace batteries in the remote control, always replace both batteries with new ones. Never mix battery types or use new and used batteries in combination.
- Always remove batteries from remote control if they are dead or if the remote control is not to be used for an extended period of time. This will prevent battery acid from leaking into the battery compartment.

Using a Remote Control

Keep in mind the following when using the remote control:

- Make sure that there are no obstacles between the remote control and the infrared sensor window on the unit.
- Remote operation may become unreliable if strong sunlight or fluorescent light is shining on the infrared sensor window of the unit.
- Remote control for different devices can interfere with each other. Avoid using remote control for other device located close to the unit.
- Replace the batteries when you notice a fall off in the operating range of the remote control.
- The maximum operable ranges from the unit are as follows.
  - **Line of sight**: approx. 23 feet (7m)
  - **Either side of the center:** approx. 16 feet (5m) within 30°
  - **Above:** approx. 16 feet (5m) within 15°
  - **Below:** approx. 10 feet (3m) within 30°

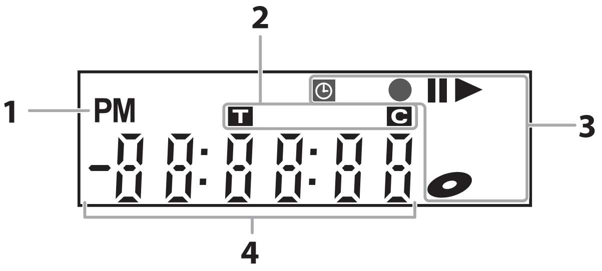

16 feet (5m)
30˚
23 feet (7m)
16 feet (5m)
30˚


1
2
POWER
ZOOM
TIMER PROG.
OPEN/CLOSE
3
14*
.@/:
ABC
DEF
INPUT SELECT
1
2
3
15
GHI
JKL
MNO
AUDIO
4
4
5
6
16
PQRS
TUV
WXYZ
REPEAT
7
8
9
17
18
DISPLAY
SPACE
CLEAR
SETUP
5
0
19
6
TOP MENU
MENU/LIST
RETURN
ENTER
20
7
21
8
9
22*
REC SPEED
REV
PLAY
FWD
10
23
11
24
►X1.3/0.8
SKIP
PAUSE
SKIP
12
25
REC/OTR
STOP
CM SKIP
13
26
27
DVD RECORDER
NB089

(*) The unit can also be turned on by pressing these buttons.

1. **TIMER PROG. button**
   Press to display the timer programming list.
2. **ZOOM button**
   During playback, press to enlarge the picture on the TV screen.
3. **POWER button**
   Press to turn the unit on and off. If timer programmings have been set, press to set the unit in timer-standby mode.
4. **Number/Character buttons**
   - Press to select a title/chapter/track/file on display.
   - Press to enter values for the settings in the main menu.
   - Press to enter title names.
5. **DISPLAY button**
   Press to display the display menu on or off.
6. **TOP MENU button**
   Press to display the title list.
7. **MENU/LIST button**
   Press to display the disc menu. To change original and playlist on the TV screen.
8. **Cursor ▲ / ▼/ ◀ / ▶ buttons**
   Press to select items or settings.
9. **REV ◀◀ button**
   - During playback, press to fast reverse playback.
   - When playback is in pause, press to slow reverse playback.
10. **REC SPEED button**
    Press to switch the recording speed.
11. **SKIP |◀◀ button**
    - During playback, press to return to the beginning of the current chapter, track or file.
    - When playback is in pause, press repeatedly to reverse the playback step by step.
12. **▶x1.3/0.8 button**
    During playback, press to play back in a slightly faster/slower while keeping the audio quality just as normal playback.
13. **REC/OTR button**
    - Press once to start a recording.
    - Press repeatedly to start the one-touch timer recording.
14. **OPEN/CLOSE ⏏ button***
    Press to open or close the disc tray.
15. **INPUT SELECT button**
    Press to select the appropriate input.
16. **AUDIO button**
    - Press to display the audio menu during playback.
17. **REPEAT button**
    Press to display the repeat menu.
18. **CLEAR button**
    Press to clear the password once entered, to cancel the programming for CD, to clear the selecting marker number in the display menu, etc.
19. **SETUP button**
    - Press to display the main menu.
    - During DVD playback, press and hold for more than 3 seconds to switch the progressive scanning mode to the interlace mode.
20. **ENTER button**
    Press to confirm or select menu items.
21. **RETURN ↩ button**
    Press to return to the previously displayed menu screen.
22. **PLAY ▶ button***
    Press to start playback or resume playback.
23. **FWD ▶▶ button**
    - During playback, press to fast forward playback.
    - When playback is in pause, press to slow forward playback.
24. **PAUSE ❚❚ button**
    Press to pause playback or recording.
25. **SKIP ▶▶| button**
    - During playback, press to skip to the next chapter, track or file.
    - When playback is in pause, press repeatedly to forward the playback step by step.
26. **CM SKIP button**
    During playback, press to skip 30 seconds.
27. **STOP ■ button**
    - Press to stop playback or recording.
    - Press to exit from the title list.

Front Panel Display



1.

PM	: Appears in the afternoon with the clock display.

2. Title / track / file and chapter mark

T	: Appears when indicating a title / track / file number.
C	: Appears when indicating a chapter number.

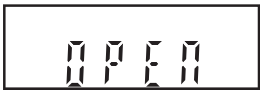
3. Current status of the unit

⏸	: Appears when playback is paused.
▶	: Appears when playing back a disc.
◷	: Appears when the timer programming or OTR has been set and is proceeding. : Flashes when all timer recordings have been finished.
●	: Appears during recording process. : Flashes when a recording pauses.
◉	: Appears when a disc is in this unit.

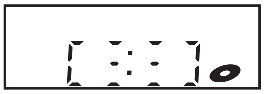
4. Displays the following

- Elapsed playback time
- Current title / chapter / track / file number
- Recording time / remaining time
- Clock
- Selected external input position
- Remaining time for one-touch timer recording

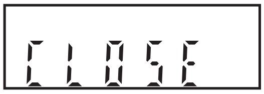
Display Message



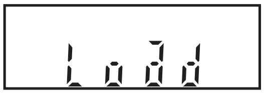
Appears when the disc tray is opening.



Appears when data is being written on a disc.



Appears when the disc tray is closing.

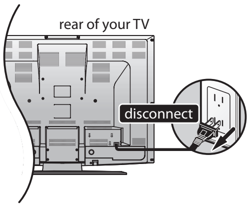


Appears when a disc is loaded on the disc tray.

CONNECTION TO AN EXTERNAL TUNER

This section describes how to connect this unit to an external tuner such as cable/satellite box.

- When you change the connections, all devices should be turned off.
- Refer to the operation manual accompanying external devices for more information.

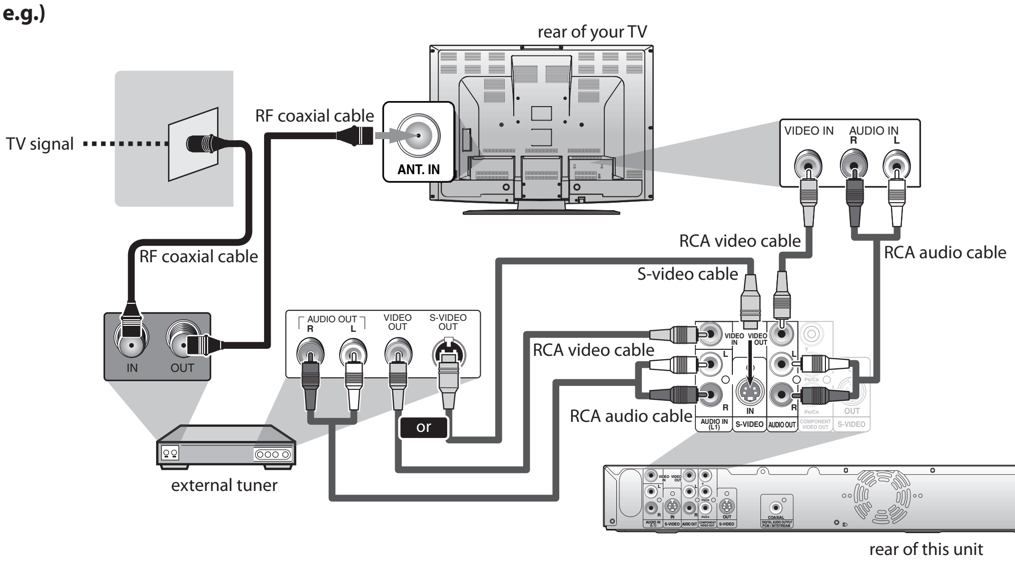

rear of your TV
disconnect

1 Disconnect the power cords of the devices from the AC outlet.

---

2 Make the connection as illustrated below.

e.g.)


rear of your TV
TV signal
RF coaxial cable
ANT. IN
VIDEO IN
AUDIO IN
R
L
RCA video cable
RCA audio cable
S-video cable
RF coaxial cable
IN
OUT
AUDIO OUT
R
L
VIDEO OUT
S-VIDEO OUT
RCA video cable
RCA audio cable
or
VIDEO IN
VIDEO OUT
AUDIO IN (L1)
S-VIDEO
AUDIO OUT
COMPONENT VIDEO OUT
external tuner
rear of this unit

Supplied cables used in this connection are as follows:

- RCA audio cable (L/R) x 1
- RCA video cable x 1

Please purchase the rest of the necessary cables at your local store.

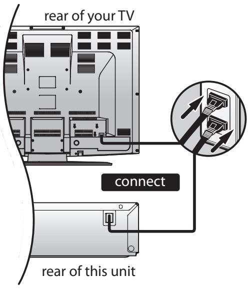
Note

- Required cables and connecting methods differ depending on the external tuner.
  For more information, please contact your external tuner provider.

With this setup:

- You can record any unscrambled channel by selecting the channel on the external tuner. Be sure that the external tuner is turned on.
- Signal from the external tuner can be output only on CVBS output even when the power of the unit is off.
- **You cannot record one channel while watching another channel.**

3 Plug in the power cords of the devices to the AC outlet.


rear of your TV
connect
rear of this unit

---

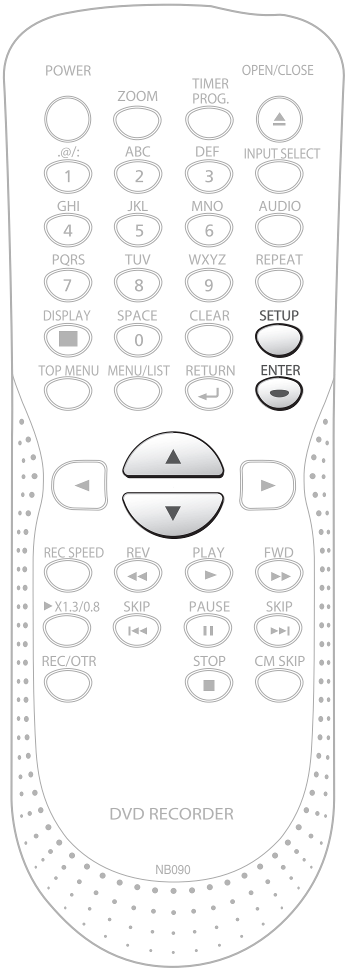
4 After making the connection as described above, make sure to select the appropriate video input type by following the steps in "SETTINGS FOR THE VIDEO INPUT" on page 16.

Note to CATV system installer

- This reminder is provided to call the cable TV system installer's attention to Article 820-40 of the National Electrical Code, which provides guidelines for proper grounding - in particular, specifying that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as possible.

SETTINGS FOR THE VIDEO INPUT

You must let the unit know which video input jack you are using before making a recording.


POWER
ZOOM
TIMER PROG.
OPEN/CLOSE
.@/:
1
ABC
2
DEF
3
INPUT SELECT
GHI
4
JKL
5
MNO
6
AUDIO
PQRS
7
TUV
8
WXYZ
9
REPEAT
DISPLAY
SPACE
0
CLEAR
SETUP
TOP MENU
MENU/LIST
RETURN
ENTER
REC SPEED
REV
PLAY
FWD
▶X1.3/0.8
SKIP
PAUSE
SKIP
REC/OTR
STOP
CM SKIP
DVD RECORDER
NB090

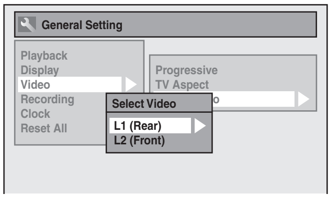
1 Press [SETUP].

2 Use [▲ / ▼] to select "General Setting", then press [ENTER].

3 Use [▲ / ▼] to select "Video", then press [ENTER].

4 Use [▲ / ▼] to select "Select Video", then press [ENTER].

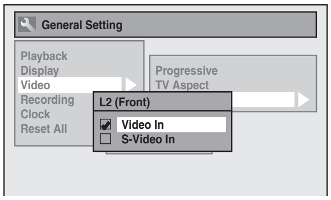
5 Use [▲ / ▼] to select desired external input position, then press [ENTER].


General Setting
Playback
Display
Video
Recording
Clock
Reset All
Progressive
TV Aspect
Select Video
L1 (Rear)
L2 (Front)

6 Use [▲ / ▼] to select the input jack type to connect, then press [ENTER].

If you want to use VIDEO IN jack, select "Video In".

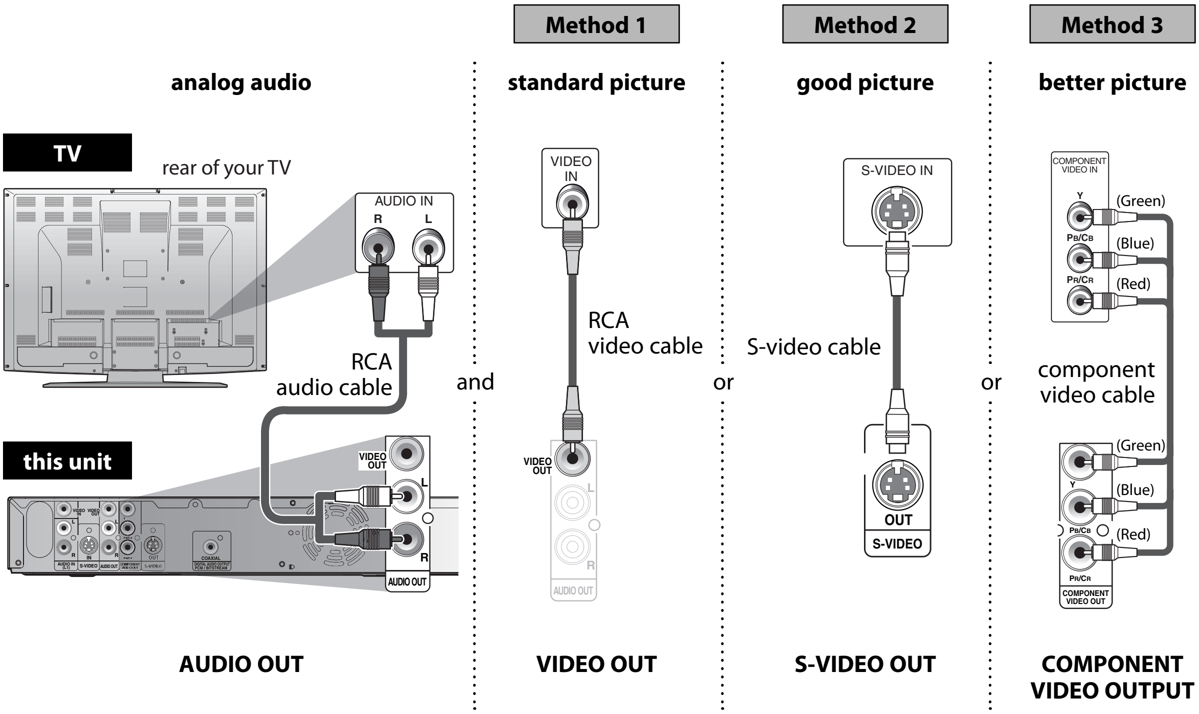
If you want to use S-VIDEO IN jack, select "S-Video In".


General Setting
Playback
Display
Video
Recording
Clock
Reset All
Progressive
TV Aspect
L2 (Front)
☑ Video In
☐ S-Video In

7 Press [SETUP] to exit.

CONNECTION TO A TV

Make one of the following connections, depending on the capabilities of your display device.


Method 1
Method 2
Method 3
analog audio
standard picture
good picture
better picture
TV
rear of your TV
AUDIO IN
R
L
RCA audio cable
and
VIDEO IN
RCA video cable
or
S-VIDEO IN
S-video cable
or
COMPONENT VIDEO IN
Y
PB/CB
PR/CR
(Green)
(Blue)
(Red)
component video cable
this unit
VIDEO OUT
L
R
AUDIO OUT
OUT
S-VIDEO
COMPONENT VIDEO OUT
AUDIO OUT
VIDEO OUT
S-VIDEO OUT
COMPONENT VIDEO OUTPUT

Supplied cables used in this connection are as follows:

- RCA audio cable (L/R) x 1
- RCA video cable x 1

Please purchase the rest of the necessary cables at your local store.

After you have completed the connections

- Switch the input selector on your TV to an appropriate external input channel. Press a button on the TV's original remote control that selects an external input channel until the DVD recorder's opening picture appears. Check your TV owner's manual for details.

Note

- Connect this unit directly to the TV. If the RCA audio/video cables are connected to a VCR, pictures may be distorted due to the copy protection system.
- **When "Progressive" is set to "ON", no video signal will be output from the VIDEO OUT or S-VIDEO OUT jack.**

To set progressive scan mode, refer to page 78

- This unit is compatible with the progressive scan system. The feature provides you the higher quality images than the traditional output system. To utilize this feature, you must set "Progressive" to "ON".

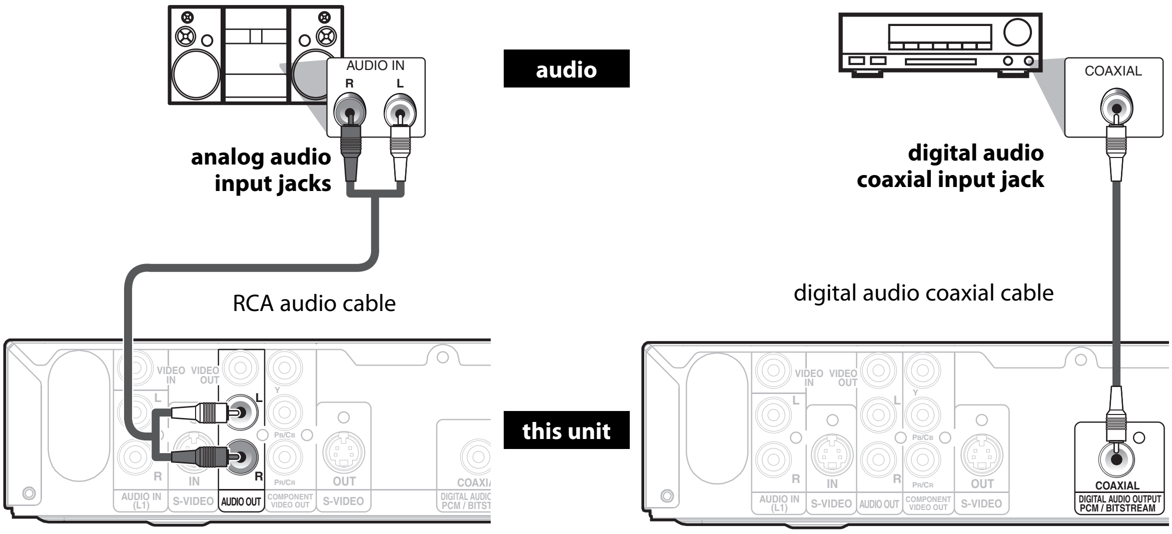
CONNECTION TO AN AUDIO SYSTEM

2 Channel Analog Audio Connection

stereo system

Digital Audio Connection

Dolby Digital decoder


AUDIO IN
R
L
analog audio input jacks
RCA audio cable
audio
COAXIAL
digital audio coaxial input jack
digital audio coaxial cable
this unit
VIDEO IN
VIDEO OUT
L
R
IN
Y
PB/CB
PR/CR
OUT
AUDIO IN (L1)
S-VIDEO
AUDIO OUT
COMPONENT VIDEO OUT
COAXIAL
DIGITAL AUDIO OUTPUT PCM / BITSTREAM

AUDIO OUT

DIGITAL AUDIO OUTPUT

*MD deck or DAT deck can be also connected through coaxial jack.

Supplied cables used in this connection are as follows:

- RCA audio cable (L/R) x 1

Please purchase the rest of the necessary cables at your local store.

Multi Channel Digital Audio Setting

Setting Connection	Setup >General Setting >Playback >Audio Out > Dolby Digital
If output is Dolby Digital encoded audio, connect to a Dolby Digital decoder.	Stream
Connecting to an MD deck or DAT deck.	PCM
If not connected to any external devices.	PCM

* To complete these settings, refer to page 73.

Note

- The audio source on a disc in a Dolby Digital multi channel surround format cannot be recorded as digital sound by an MD or DAT deck.
- By connecting this unit to a Dolby Digital decoder, you can enjoy high-quality Dolby Digital multi channel surround sound as heard in the movie theaters.
- Playing back a DVD using incorrect settings may generate noise distortion and may also damage the speakers.

GUIDE TO ON-SCREEN DISPLAYS AND MENUS

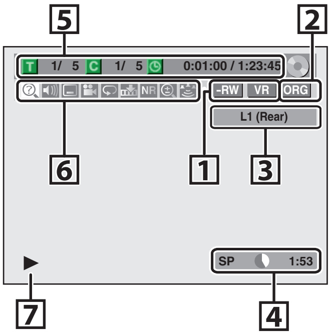
This unit uses the following on-screen displays and menus to guide you to the easy operations.
The on-screen displays give you the information on the loaded disc, the disc/file in playback, etc.
The menus allow you to change the various kinds of settings for playing back, recording, or editing to suite your preference.

On-Screen Display / Menu

The on-screen display changes in the following order as you press [DISPLAY].

OFF
↓
Disc Information/Menu
↓
Title Name Information
(only when VR mode DVD-RW/-R, or unfinalized Video mode DVD-RW/-R is in playback)
or
File Name Information
(only when a CD with MP3/JPEG/Kodak Picture CD files is in playback)

Disc Information / Menu



* This is an example screen only for explanation.

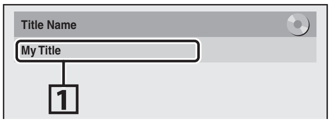
1. Indicates a disc type and format mode.
2. Indicates a type of titles for VR mode DVD-RW .
3. Indicates the selected external input position.
4. Indicates a recording speed and possible recording time left.
5. Indicates a title number, chapter number, elapsed time and total time of disc playback.
6. Each icon means:
   - : Search
   - : Audio
   - : Subtitle
   - : Angle
   - : Repeat
   - : Marker
   - : Noise Reduction
   - : Zoom
   - : Surround
7. Indicates an operation status.

> ***Note***
> - In some descriptions on this manual, only one disc type is indicated as an example.

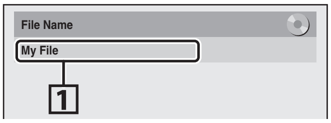
Title/File Name Information

1. Displays title/file name.

Title name information

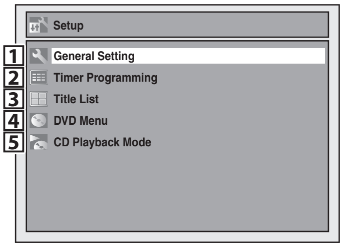


File name information



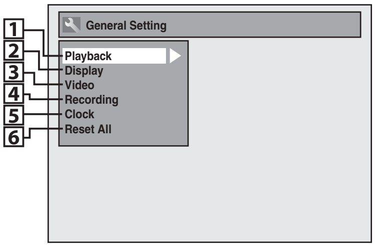
Main Menu

Press **[SETUP]** to display the main menu. Then use **[▲ / ▼]** to select a menu and press **[ENTER]** to display the menu. These menus provide entries to all main functions of the unit.


Setup
1
General Setting
2
Timer Programming
3
Title List
4
DVD Menu
5
CD Playback Mode

1. **General Setting:**
   To go to general setting menu.
2. **Timer Programming:**
   To program a timer recording.
3. **Title List:**
   To call up the title list.
4. **DVD Menu:**
   To set up the DVD setting.
5. **CD Playback Mode:**
   To set up the CD playback setting.
   - "CD Playback Mode" is available only when an audio CD, a CD-RW/-R with MP3 / JPEG / Kodak Picture CD files is inserted into the unit.

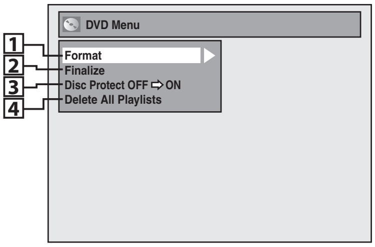
General Setting Menu


General Setting
1
2
3
4
5
6
Playback
Display
Video
Recording
Clock
Reset All

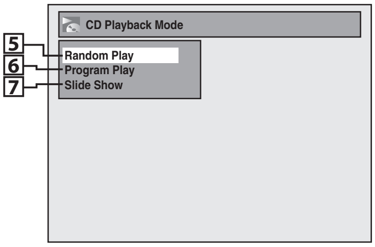
1. **Playback:**
   To set up the unit to play back discs as you prefer.
2. **Display:**
   To set up the OSD screen as you prefer.
3. **Video:**
   To set up the video setting.
4. **Recording:**
   To set up the unit to record to discs as you prefer.
5. **Clock:**
   To set up the clock of the unit as you need.
6. **Reset All:**
   To reset the setting to the factory default.

DVD Menu / CD Playback Mode

<DVD Menu menu>


DVD Menu
1
2
3
4
Format
Finalize
Disc Protect OFF ⇨ ON
Delete All Playlists

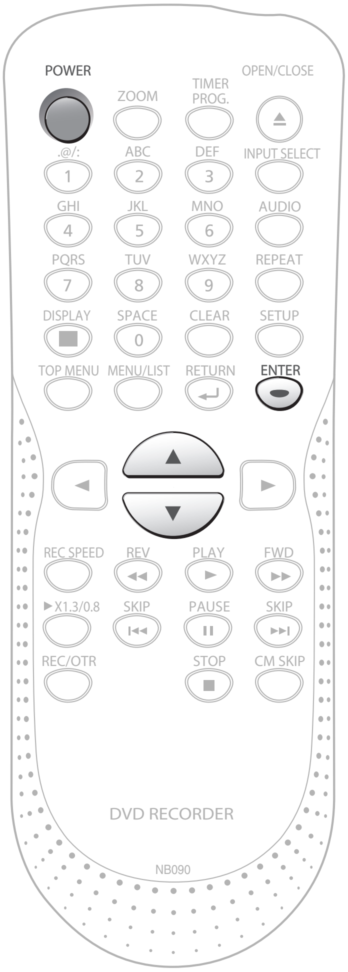
<CD Playback Mode menu>


CD Playback Mode
5
6
7
Random Play
Program Play
Slide Show

1. **Format** (DVD-RW only)**:**
   Allows you to format the disc.
2. **Finalize:**
   Allows you to finalize a disc containing recorded titles.
3. **Disc Protect** (VR mode DVD-RW only)**:**
   Allows you to protect a disc from accidental editing or recording.
4. **Delete All Playlists** (VR mode DVD-RW only)**:**
   Allows you to delete playlist.
5. **Random Play:**
   Allows you to activate the random playback feature.
6. **Program Play:** (Audio CD only)
   Allows you to activate the program playback feature.
7. **Slide Show:** (JPEG / Kodak Picture CD files only)
   Allows you to select the display time of the slide show mode.

INITIAL SETTING

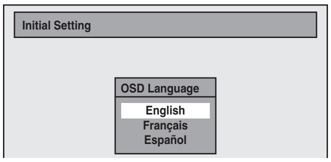
You need to follow these steps when you turn on this unit for the first time.


POWER
OPEN/CLOSE
ZOOM
TIMER PROG.
.@/:
ABC
DEF
INPUT SELECT
1
2
3
GHI
JKL
MNO
AUDIO
4
5
6
PQRS
TUV
WXYZ
REPEAT
7
8
9
DISPLAY
SPACE
CLEAR
SETUP
0
TOP MENU
MENU/LIST
RETURN
ENTER
REC SPEED
REV
PLAY
FWD
▶X1.3/0.8
SKIP
PAUSE
SKIP
REC/OTR
STOP
CM SKIP
DVD RECORDER
NB090

1 **Press [POWER].**

Turn on the TV. Select the input to which the unit is connected.

2 **Use [▲ / ▼] to select your desired language, then press [ENTER] to set language.**

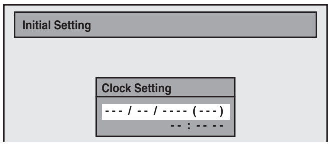


Initial Setting

OSD Language

English
Français
Español

3 **Press [ENTER] to activate “Clock Setting”.**



Initial Setting

Clock Setting

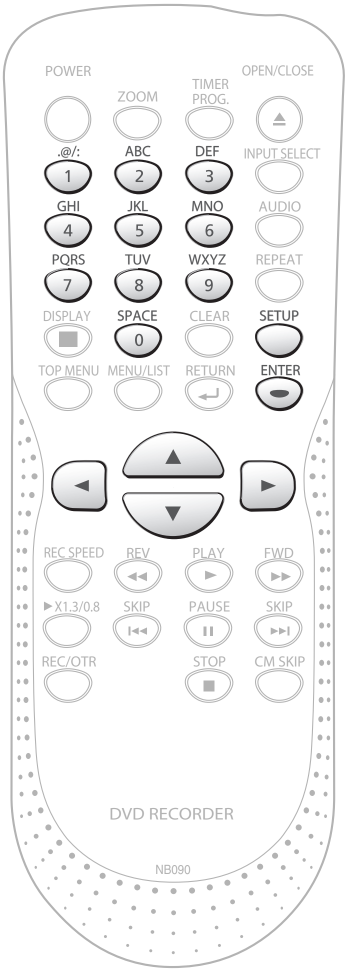
--- / -- / ---- (---)
-- : -- --

4 **Proceed to step 4 in “Clock Setting” on page 22.**

SETTING THE CLOCK

Set the clock before you try the timer programming.

Clock Setting

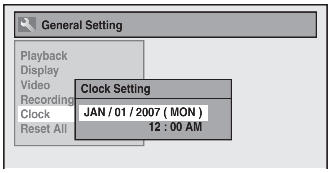

POWER
ZOOM
TIMER PROG.
OPEN/CLOSE
.@/:
1
ABC
2
DEF
3
INPUT SELECT
GHI
4
JKL
5
MNO
6
AUDIO
PQRS
7
TUV
8
WXYZ
9
REPEAT
DISPLAY
SPACE
0
CLEAR
SETUP
TOP MENU
MENU/LIST
RETURN
ENTER
REC SPEED
REV
PLAY
FWD
▶X1.3/0.8
SKIP
PAUSE
SKIP
REC/OTR
STOP
CM SKIP
DVD RECORDER
NB090

1 **Press [SETUP] and use [▲ / ▼] to select “General Setting”, then press [ENTER].**

2 **Use [▲ / ▼] to select “Clock”, then press [ENTER].**

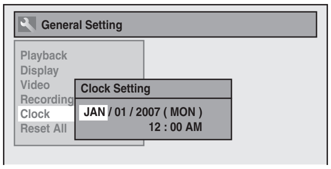
“Clock” menu will appear.

3 **Use [▲ / ▼] to select calendar or time, then press [ENTER].**


General Setting
Playback
Display
Video
Recording
Clock
Reset All
Clock Setting

JAN / 01 / 2007 (MON)
12 : 00 AM

4 **Use [◀ / ▶] to select an item to set, and use [▲ / ▼] to select the contents to suit your preference, then press [ENTER].**


General Setting
Playback
Display
Video
Recording
Clock
Reset All
Clock Setting

JAN / 01 / 2007 (MON)
12 : 00 AM

Your setting will be activated.

The clock start counting when you press **[ENTER]**.

5 **Press [SETUP] to exit.**

Note

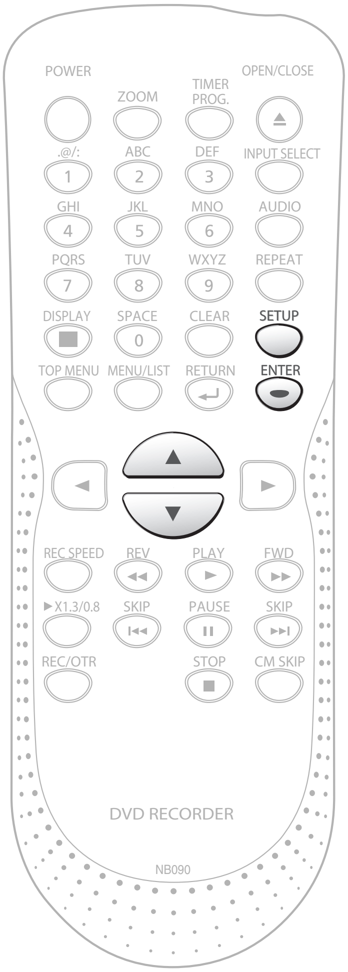
- Your clock setting will be lost if either there is a power failure or this unit has been unplugged for more than 30 seconds.
- For setting the day, year, hour and minute, **[the Number buttons]** can also be used.
- You can set the built-in calendar from the year 2007 up to 2056.

FORMATTING A DISC

Choosing the Recording Format of a Brand-New DVD-RW

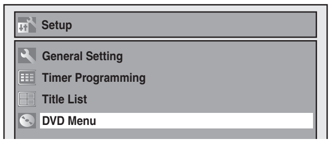
When inserting a brand-new DVD-RW, the unit automatically starts to initialize the disc.

DVD-RW will be formatted either video or VR mode according to the recording format mode setting of the unit. Before insert a brand-new DVD-RW, you need to set the recording format to the desired mode. You can also manually format a DVD-RW once it has been used.

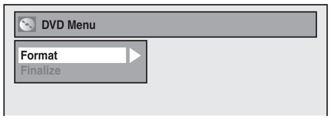

POWER
ZOOM
TIMER PROG.
OPEN/CLOSE
.@/: 1
ABC 2
DEF 3
INPUT SELECT
GHI 4
JKL 5
MNO 6
AUDIO
PQRS 7
TUV 8
WXYZ 9
REPEAT
DISPLAY
SPACE 0
CLEAR
SETUP
TOP MENU
MENU/LIST
RETURN
ENTER
REC SPEED
REV
PLAY
FWD
▶X1.3/0.8
SKIP
PAUSE
SKIP
REC/OTR
STOP
CM SKIP
DVD RECORDER
NB090

1 **Press [SETUP].**

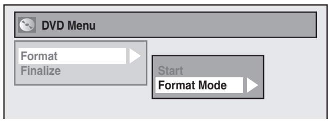
2 **Use [▲ / ▼] to select “DVD Menu”, then press [ENTER].**


Setup
General Setting
Timer Programming
Title List
DVD Menu

3 **Use [▲ / ▼] to select “Format”, then press [ENTER].**


DVD Menu
Format
Finalize

4 **Use [▲ / ▼] to select “Format Mode”, then press [ENTER].**

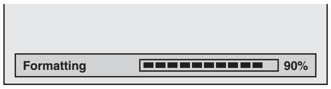

DVD Menu
Format
Finalize
Start
Format Mode

5 **Use [▲ / ▼] to select “Video mode” or “VR mode”, then press [ENTER].**

6 **Press [SETUP] to exit.**

7 **Insert a brand-new disc.**

Formatting will start.


Formatting
90%

8 **Formatting is completed.**

“100%” is indicated.

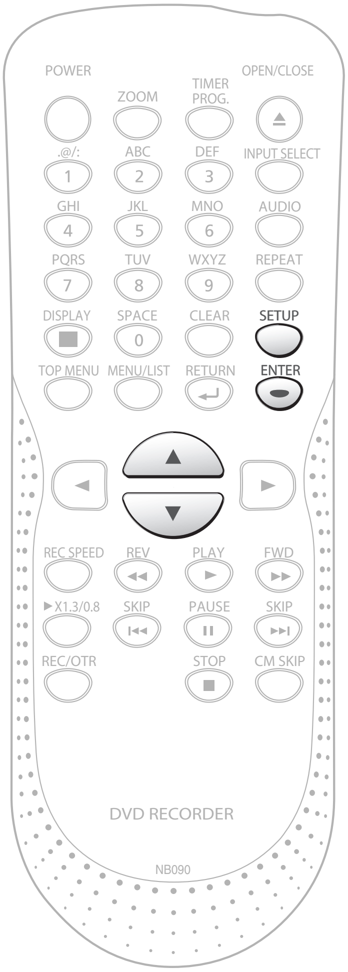
Note

- The recording format setting is effective only for DVD-RW. You cannot change the recording format for a DVD-R.
- You cannot mix 2 formats on one DVD-RW. If you insert a disc that has been recorded before, the recording format cannot be changed even if you change it in the main menu.

Reformatting a Disc Manually

DVD -RW VIDEO MODE DVD -RW VR MODE

If you are using a DVD-RW, you can format the disc by performing "Format". You can format DVD-RW for either video mode recording or VR mode recording.


POWER
ZOOM
TIMER PROG.
OPEN/CLOSE
.@/: 1
ABC 2
DEF 3
INPUT SELECT
GHI 4
JKL 5
MNO 6
AUDIO
PQRS 7
TUV 8
WXYZ 9
REPEAT
DISPLAY
SPACE 0
CLEAR
SETUP
TOP MENU
MENU/LIST
RETURN
ENTER
REC SPEED
REV
PLAY
FWD
▶X1.3/0.8
SKIP
PAUSE
SKIP
REC/OTR
STOP
CM SKIP
DVD RECORDER
NB090

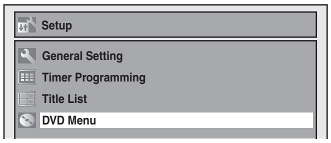
Note

- When you reformat the disc, the contents of the disc are erased.
- For DVD-RW, make sure that the recording format is set to the desired mode. (See steps 1 to 6 in "Choosing the Recording Format of a Brand-New DVD-RW" on page 23.)

Insert a recordable disc.

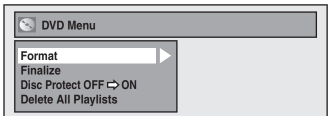
1 **Press [SETUP].**

2 **Use [▲ / ▼] to select "DVD Menu", then press [ENTER].**

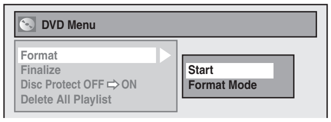

Setup
General Setting
Timer Programming
Title List
DVD Menu

3 **Use [▲ / ▼] to select "Format", then press [ENTER].**

e.g.) VR mode DVD-RW


DVD Menu
Format
Finalize
Disc Protect OFF ⇨ ON
Delete All Playlists

4 **Use [▲ / ▼] to select "Start", then press [ENTER].**

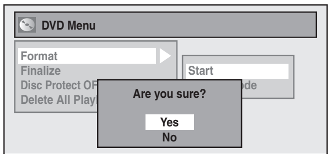

DVD Menu
Format
Finalize
Disc Protect OFF ⇨ ON
Delete All Playlist
Start
Format Mode

Selection menu will appear and prompt you to confirm.

5 **Use [▲ / ▼] to select "Yes", then press [ENTER].**

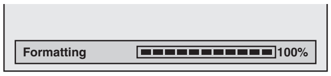
Formatting will start.

If you want to cancel formatting, select "No".


DVD Menu
Format
Finalize
Disc Protect OF
Delete All Play
Start
de
Are you sure?
Yes
No

6 **Formatting is completed.**

"100%" is indicated.


Formatting
100%

PREPARING A DISC

Setting for Auto Chapter

You can set a specified time for chapter marks.

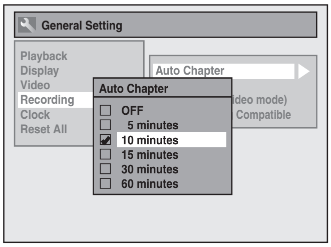
1) Press [SETUP] and use [▲ / ▼] to select “General Setting”, then press [ENTER].

2) Use [▲ / ▼] to select “Recording”, then press [ENTER].

“Recording” menu will appear.

3) Use [▲ / ▼] to select “Auto Chapter”, then press [ENTER].

4) Use [▲ / ▼] to select a desired time option, then press [ENTER].


General Setting
Playback
Display
Video
Recording
Clock
Reset All
Auto Chapter
ideo mode)
Compatible
Auto Chapter
☐ OFF
☐ 5 minutes
☑ 10 minutes
☐ 15 minutes
☐ 30 minutes
☐ 60 minutes

5) Press [SETUP] to exit.

> ***Note***
> - The interval for auto chapter marks may slightly differ.
> - A blank chapter may be created depending on the remaining time of the disc.

Setting Aspect Ratio for Video Mode Recording

DVD -RW VIDEO MODE DVD -R VIDEO MODE

You can set aspect ratio for video mode recording.

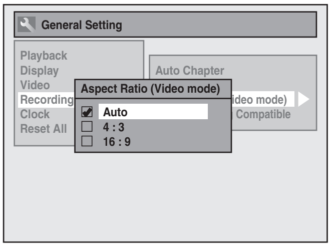
1) Press [SETUP] and use [▲ / ▼] to select “General Setting”, then press [ENTER].

2) Use [▲ / ▼] to select “Recording”, then press [ENTER].

“Recording” menu will appear.

3) Use [▲ / ▼] to select “Aspect Ratio (Video mode)”, then press [ENTER].

4) Use [▲ / ▼] to select your desired setting, then press [ENTER].


General Setting
Playback
Display
Video
Recording
Clock
Reset All
Auto Chapter
ideo mode)
Compatible
Aspect Ratio (Video mode)
☑ Auto
☐ 4 : 3
☐ 16 : 9

Auto (default): It will be recorded with whichever the ratio that the program you started to record are broadcasted with.

4:3 : Recorded in the aspect ratio of 4:3.

16:9 : Recorded in the aspect ratio of 16:9.

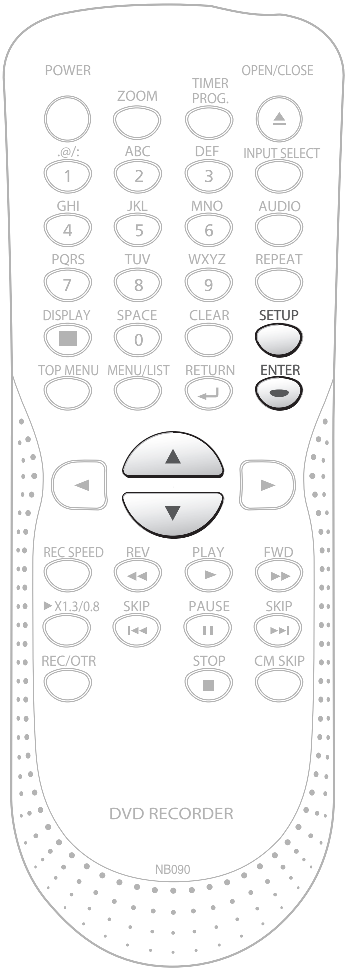
5) Press [SETUP] to exit.

> ***Note***
> - For DVD-RW VR mode, the image will be recorded in whichever the ratio that the program you record are broadcasted with, regardless of the “Aspect Ratio (Video mode)” setting.

SETTING A DISC TO PROTECT

DVD -RW VR MODE

To prevent accidental recording, editing or erasing the titles, you can protect them from “DVD Menu”.

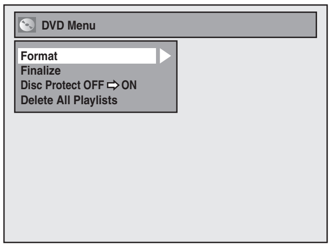

POWER
OPEN/CLOSE
ZOOM
TIMER PROG.
.@/: 1
ABC 2
DEF 3
INPUT SELECT
GHI 4
JKL 5
MNO 6
AUDIO
PQRS 7
TUV 8
WXYZ 9
REPEAT
DISPLAY
SPACE 0
CLEAR
SETUP
TOP MENU
MENU/LIST
RETURN
ENTER
REC SPEED
REV
PLAY
FWD
X1.3/0.8
SKIP
PAUSE
SKIP
REC/OTR
STOP
CM SKIP
DVD RECORDER
NB090

1 **Press [SETUP].**

2 **Use [▲ / ▼] to select “DVD Menu”, then press [ENTER].**

3 **Use [▲ / ▼] to select “Disc Protect OFF ➡ ON”, then press [ENTER].**

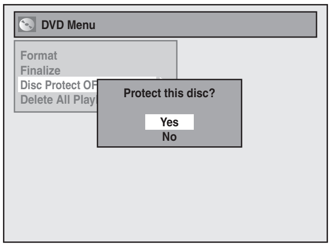
e.g.) VR mode DVD-RW



DVD Menu

Format
Finalize
Disc Protect OFF ⇨ ON
Delete All Playlists

4 **Use [▲ / ▼] to select “Yes”, then press [ENTER].**



DVD Menu

Format
Finalize
Disc Protect OF
Delete All Playl

Protect this disc?

Yes
No

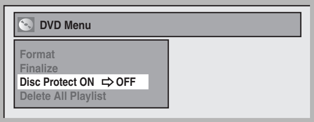
A disc will be protected.

This operation may take awhile to be completed.

Note

To cancel the disc protect:

- When you insert a disc protected with this unit, “Disc Protect ON ➡ OFF” will appear instead of “OFF ➡ ON”.



DVD Menu

Format
Finalize
Disc Protect ON ⇨ OFF
Delete All Playlist

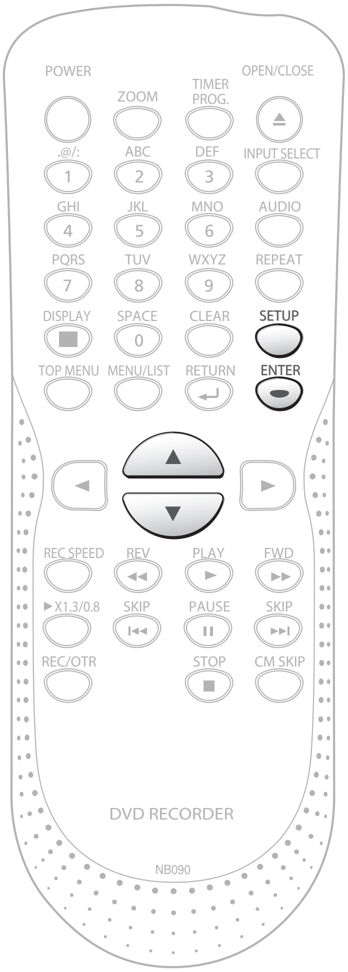
To release the protect for the disc, select “Yes” at step 4.

PLAYING THE DISCS IN OTHER DVD PLAYERS

Auto Finalizing

DVD -RW VIDEO MODE DVD -R VIDEO MODE

You can finalize discs automatically using this function. You can use this function to finalize discs after finishing all timer recordings and at the end of the disc space.


POWER
ZOOM
TIMER PROG.
OPEN/CLOSE
.@/: 1
ABC 2
DEF 3
INPUT SELECT
GHI 4
JKL 5
MNO 6
AUDIO
PQRS 7
TUV 8
WXYZ 9
REPEAT
DISPLAY
SPACE 0
CLEAR
SETUP
TOP MENU
MENU/LIST
RETURN
ENTER
REC SPEED
REV
PLAY
FWD
▶X1.3/0.8
SKIP
PAUSE
SKIP
REC/OTR
STOP
CM SKIP
DVD RECORDER
NB090

1 **Press [SETUP] and use [▲ / ▼] to select “General Setting”, then press [ENTER].**

“General Setting” menu will appear.

---

2 **Use [▲ / ▼] to select “Recording”, then press [ENTER].**

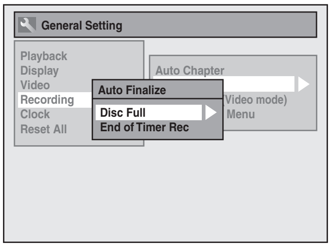
“Recording” menu will appear.

---

3 **Use [▲ / ▼] to select “Auto Finalize”, then press [ENTER].**

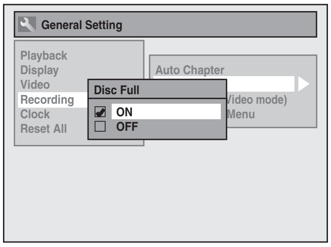
---

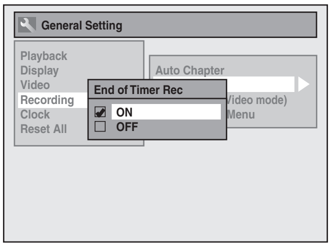
4 **Use [▲ / ▼] to select “Disc Full” or “End of Timer Rec”, then press [ENTER].**


General Setting
Playback
Display
Video
Recording
Clock
Reset All
Auto Chapter
Video mode)
Menu
Auto Finalize
Disc Full
End of Timer Rec

---

5 **Use [▲ / ▼] to select “ON”, then press [ENTER].**


General Setting
Playback
Display
Video
Recording
Clock
Reset All
Auto Chapter
Video mode)
Menu
Disc Full
☑ ON
☐ OFF


General Setting
Playback
Display
Video
Recording
Clock
Reset All
Auto Chapter
Video mode)
Menu
End of Timer Rec
☑ ON
☐ OFF

Your setting will be activated.

---

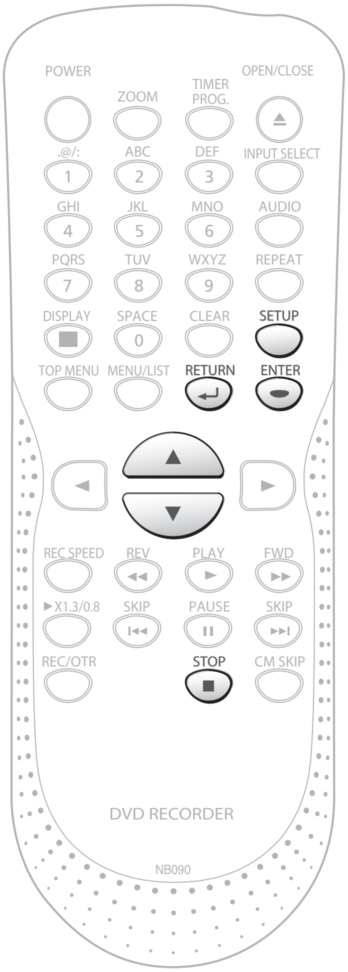
6 **Press [SETUP] to exit.**

Finalizing a Disc

You will need to finalize discs to play back on other DVD players.

Finalizing may take several minutes up to an hour.

Since the process of the finalization fills empty space of the disc, a shorter recording period on the disc will require a longer time period for finalization. Do not unplug the power cord during finalization.

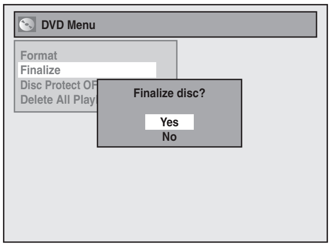

POWER
ZOOM
TIMER PROG.
OPEN/CLOSE
.@/: 1
ABC 2
DEF 3
INPUT SELECT
GHI 4
JKL 5
MNO 6
AUDIO
PQRS 7
TUV 8
WXYZ 9
REPEAT
DISPLAY
SPACE 0
CLEAR
SETUP
TOP MENU
MENU/LIST
RETURN
ENTER
REC SPEED
REV
PLAY
FWD
▶X1.3/0.8
SKIP
PAUSE
SKIP
REC/OTR
STOP
CM SKIP
DVD RECORDER
NB090

1 **Press [SETUP].**

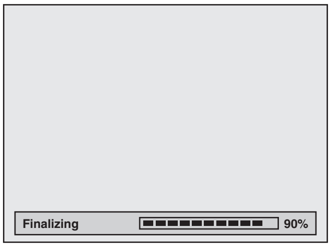
2 **Use [▲ / ▼] to select “DVD Menu”, then press [ENTER].**
“DVD Menu“ will appear.

3 **Use [▲ / ▼] to select “Finalize”, then press [ENTER].**

4 **Use [▲ / ▼] to select “Yes”, then press [ENTER].**
e.g.) VR mode DVD-RW


DVD Menu
Format
Finalize
Disc Protect OF
Delete All Play
Finalize disc?
Yes
No

Finalizing will start.

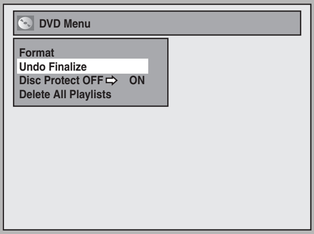

Finalizing
90%

This operation may take awhile to be completed.

5 **Finalizing is completed.**

Note

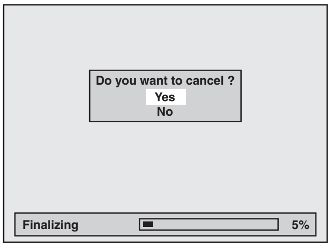
- Finalizing a disc in video mode automatically creates a DVD menu.
- Even after DVD-RW in VR mode is finalized, you can still record or edit. After you finalize DVD-RW in video mode or DVD-R, you cannot edit or record anything else on that disc.
- If you insert a DVD-RW finalized with this unit, "Undo Finalize" will appear instead of "Finalize" at step 3.
- To release the finalization of the DVD-RW disc, select "Undo Finalize" at step 3.



- DO NOT power off during finalizing. This may result in a malfunction.

To cancel finalizing... (DVD-RW only)

Press **[STOP ■]** during the finalizing is in progress. Use **[▲ / ▼]** to select "Yes", then press **[ENTER]**. Finalizing is canceled and the unit switches to stop mode.



If "⃠" appears when **[STOP ■]** is pressed, you cannot cancel finalizing because the finalizing has already reached at a critical point in its process.

If "No" is selected and **[ENTER]** or **[RETURN ↵]** is pressed, finalizing is continued.

You cannot cancel finalizing DVD-R once it has started.

INFORMATION ON DVD RECORDING

Recording Speed

You can select a recording speed among 5 options, and the recording time will depend on the recording speed you select as follows.

Recording speed	Recording time		Video/ sound quality
	12cm	8cm	
XP / 1H	60 min	18 min	☆☆☆☆☆
SP / 2H	120 min	36 min	☆☆☆☆
LP / 4H	240 min	72 min	☆☆☆
EP / 6H	360 min	108 min	☆☆
SLP / 8H	480 min	144 min	☆

- The recording times listed above are estimates and are for reference purposes only. Actual recording times may vary.
- The audio and video quality of content being recorded may differ depending on the recording speed/recording time chosen.

Note

- **This unit cannot record to CD-RW or CD-R.**
- DVD-RW/-R and CD-RW/-R recorded on a personal computer or a DVD or CD recorder may not be played back if the disc is damaged or dirty or if there is condensation on the player's lens.
- If you record a disc using a personal computer, even if it is recorded in a compatible format it may not be played back because of the settings of the application software used to create the disc. (Check with the software publisher for more detailed information.)
- Discs recorded in video mode on this unit cannot record additional information using other DVD recorders.
- It is not possible to use a DVD-RW formatted with this unit on other DVD recorder unless the content of the disc was also recorded with this unit.
- Since the recording is made by the VBR (variable bit rate) method, depending on the picture you are recording, the actual remaining time for recording may be a little shorter than the remaining time displayed on the TV screen.
- **"Make Recording Compatible" in "Recording" menu does not work on this unit.**

Restrictions on Recording

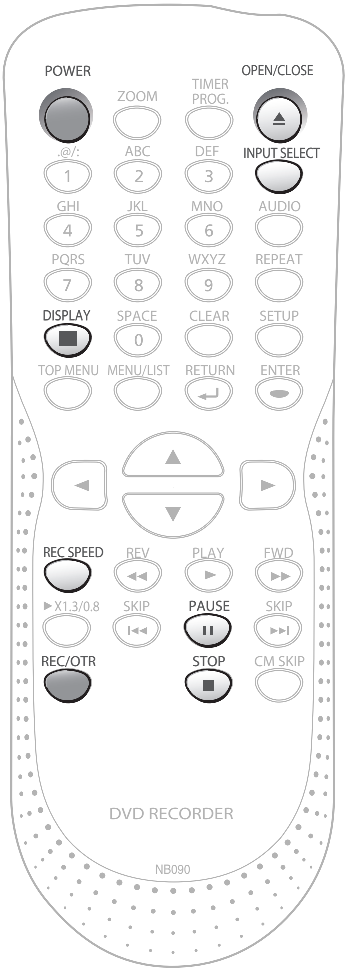
You cannot record copy-protected video using this unit. Copy-protected video includes DVD-videos and some satellite broadcasts, some pay-per-view stations and some "premium" stations.
If copy-protected material is detected, recording will pause or stop automatically and an error message appears on the screen.
"Copy-once only" video can only be recorded to CPRM compatible DVD-RW formatted in VR mode.

What is "CPRM"?
CPRM is a copy protection system with scramble system regarding the recording of "copy-once" broadcast programs. CPRM stands for Content Protection for Recordable Media.
This unit is CPRM compatible, which means that you can record copy-once broadcast programs, but you cannot make another copy of those recordings. CPRM recordings can only be made on CPRM compatible DVD-RW formatted in VR mode, and CPRM recordings can only be played back on DVD players that are specifically compatible with CPRM.

Making discs playable in other DVD players(Finalize)
For DVD-RW/-R, it is necessary to finalize the disc after recording, in order to play back the disc on other DVD players. (Refer to pages 27-29.)
When video mode DVD-RW or DVD-R are finalized, a DVD menu is created. You cannot finalize discs in other DVD recorders.

BASIC RECORDING & ONE-TOUCH TIMER RECORDING

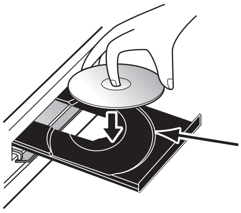
Follow the steps to record TV programs from an external tuner.
This unit has no tuner system so cannot receive TV broadcasts without external tuner or such devices.


POWER
ZOOM
TIMER PROG.
OPEN/CLOSE
.@/:
ABC
DEF
INPUT SELECT
1
2
3
GHI
JKL
MNO
AUDIO
4
5
6
PQRS
TUV
WXYZ
REPEAT
7
8
9
DISPLAY
SPACE
CLEAR
SETUP
0
TOP MENU
MENU/LIST
RETURN
ENTER
REC SPEED
REV
PLAY
FWD
▶X1.3/0.8
SKIP
PAUSE
SKIP
REC/OTR
STOP
CM SKIP
DVD RECORDER
NB090

1 Press [POWER].

Turn on the TV and be sure to select the input to which the unit is connected.

2 Press [OPEN/CLOSE ▲] to open the disc tray and insert your disc with its label facing up.



Align the disc to the disc tray guide.

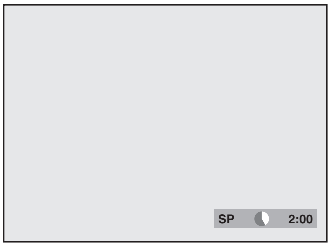
3 Press [OPEN/CLOSE ▲] to close the disc tray.

It may take awhile to load the disc completely.

- When inserting a brand-new DVD-RW, the unit automatically starts to format.
- If titles have been recorded on the disc, the title list is displayed. Press **[STOP ■]** to exit the title list.

4 Press [REC SPEED] to select a recording speed.

Refer to “Recording Speed” on page 30.

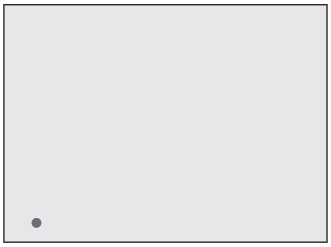


5 Press [INPUT SELECT] to select the appropriate external input position (L1/L2) to which your external tuner is connected. Then select the desired channel to record on the external tuner.

Instructions continue on the next page.

6 Press [REC/OTR] to start recording.

"●" will be displayed for 5 seconds.



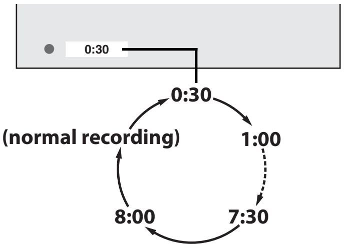
Press **[PAUSE ❙❙]** to pause recording.
Press **[PAUSE ❙❙]** or **[REC/OTR]** again to restart recording.

To set one-touch timer recording (OTR)...

This is a simple way to set the recording time in blocks of 30 minutes.

Press **[REC/OTR]** repeatedly until the desired recording time (30 minutes to 8 hours) appears on the TV screen.

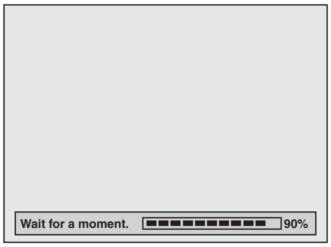
One-touch timer recording will start.



- To change the recording length during one-touch timer recording, press **[REC/OTR]** repeatedly until the desired length appears.
- To cancel one-touch timer recording within the specified time, press **[STOP ■]**.

7 Press [STOP ■] to stop recording.

The recorded title will be included in the title list. (Refer to "Guide to a Title List" on page 55.)


Wait for a moment. ▬▬▬▬▬▬▬▬▬▬ 90%

This operation may take awhile to be completed.

Note

- When you press **[REC/OTR]**, recording starts immediately and continues until the disc is full or you stop recording.
- When the unit clock has not been set, the space for a date and time of title names will be blank.
- You cannot change the recording speed during the recording pause mode.
- You can change a channel to be recorded during the recording pause mode.

Note for one-touch timer recording

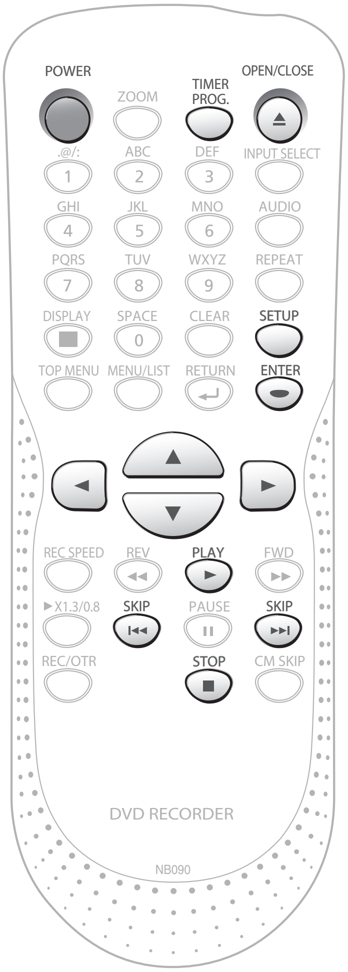
- The remaining recording time will be displayed on the front panel display during one-touch timer recording. Press **[DISPLAY]** to see it on the TV screen.
- Unlike the timer recording, you can perform the following operations during one-touch timer recording.
  - Turning off the power (One-touch timer recording will be canceled.).
  - Using **[REC/OTR]** or **[STOP ■]** on the remote control.
- You cannot use the pause function during one-touch timer recording.
- When one-touch timer recording is finished and the power is turned off, the unit will switch to the timer-standby mode automatically if a timer recording has been programmed. Press **[POWER]** to cancel the timer-standby mode to use the unit continuously.

TIMER RECORDING

You can program the unit to record up to 12 programs within a month in advance. Daily or weekly program recordings are also available.

Before recording, make sure

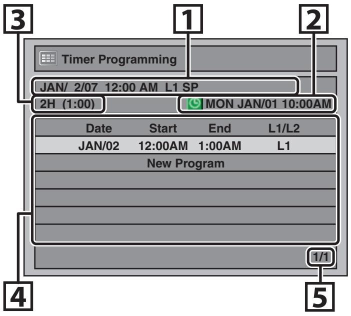
- Connect the external tuner to either L1 or L2 and set it to output audio/video signals when it comes to the time you want to start recording.
- Do not change the external tuner's channel while you are recording. You cannot watch one channel and record another at the same time.
- Set the clock before setting a timer programming.
- Insert a recordable disc with enough recordable space.


POWER
ZOOM
TIMER PROG.
OPEN/CLOSE
.@/:
ABC
DEF
INPUT SELECT
1
2
3
GHI
JKL
MNO
AUDIO
4
5
6
PQRS
TUV
WXYZ
REPEAT
7
8
9
DISPLAY
SPACE
CLEAR
SETUP
0
TOP MENU
MENU/LIST
RETURN
ENTER
REC SPEED
REV
PLAY
FWD
▶X1.3/0.8
SKIP
PAUSE
SKIP
REC/OTR
STOP
CM SKIP
DVD RECORDER
NB090

Note

- **If you have not set the clock yet:**
  "Clock Setting" menu will appear instead of the timer programming list at step 1. Continue with the step 3 in "Clock Setting" on page 22 before setting a timer programming.
- Use **[◀ / ▶]** to move the cursor to the left and the right in "Timer Programming" menu.
- Timer recording will not work when the power is on.
- When power is on, programs registered for recording in timer recording will be automatically cleared after the end time and date have passed.

Guide to Timer Programming Display



Timer Programming

JAN/ 2/07 12:00 AM L1 SP

2H (1:00)

MON JAN/01 10:00AM

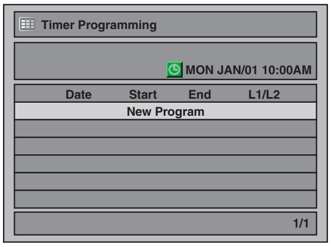
Date	Start	End	L1/L2
JAN/02	12:00AM	1:00AM	L1
New Program			

1/1

1. Title of a timer program (Contains date, time, channel, recording speed of the program)
2. Current date and time
3. Recording speed and length of the recording
4. Timer program list
5. Total number of pages and current page (2 pages maximum)

1 Press [TIMER PROG.].

2 Use [▲ / ▼] to select "New Program", then press [ENTER].



Timer Programming

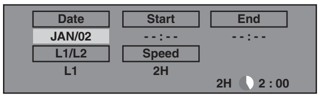
MON JAN/01 10:00AM

Date	Start	End	L1/L2
New Program			

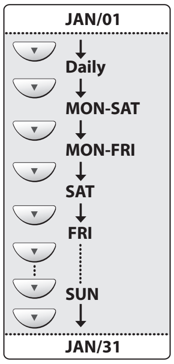
1/1

- If there are 6 or more programs, use **[SKIP ⏮ / ⏭]** to change pages.

3 Use [▲ / ▼] to enter the date, then press [▶].



Date	Start	End
JAN/02	- - : - -	- - : - -
L1/L2	Speed	
L1	2H	2H 2 : 00

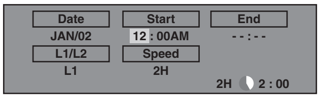

JAN/01
Daily
MON-SAT
MON-FRI
SAT
FRI
SUN
JAN/31

When pressing **[▼]** at the current date, the date will change as follows.

e.g.) January 1st

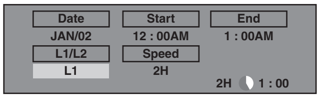
Instructions continue on the next page.

4 Use [▲ / ▼ / ◀ / ▶] or [the Number buttons] to enter the start and end time, then press [▶].



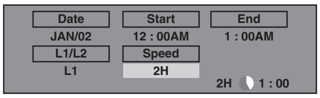
Date	Start	End
JAN/02	12 : 00AM	- - : - -
L1/L2	Speed	
L1	2H	
		2H ◐ 2 : 00

5 Use [▲ / ▼] to select the appropriate external input position (L1/L2) to which your external tuner is connected, then press [▶].



Date	Start	End
JAN/02	12 : 00AM	1 : 00AM
L1/L2	Speed	
L1	2H	
		2H ◐ 1 : 00

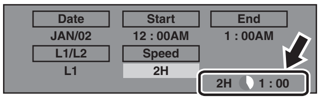
6 Use [▲ / ▼] to select a recording speed.



Date	Start	End
JAN/02	12 : 00AM	1 : 00AM
L1/L2	Speed	
L1	2H	
		2H ◐ 1 : 00

Refer to “Recording Speed” on page 30.

- You can check the remaining recordable space of the disc when you select the recording speed.



Date	Start	End
JAN/02	12 : 00AM	1 : 00AM
L1/L2	Speed	
L1	2H	
		2H ◐ 1 : 00

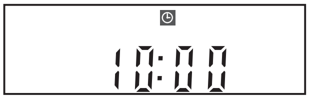
7 Press [ENTER] when all items are entered.

Your program setting will be stored.

- To set another program, repeat steps 2 to 7.
- To exit, press **[TIMER PROG.]** or **[SETUP]**.
- When 2 or more programs are overlapped, “Timer program overlapped” appears, and the overlapped program will be displayed in blue. To correct the timer program refer to “Checking, canceling, or correcting the timer programming information” on page 35.

8 Press [POWER] to set a timer programming.

◷ will appear on the front panel display, while this unit waits to make the recording.



TIMER RECORDING

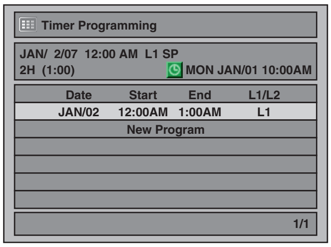
Checking, canceling, or correcting the timer programming information

1) Press [POWER].

🕒 will disappear on the front panel display.

2) Press [TIMER PROG.].

3) Check the information on the list you want to edit.



Timer Programming
JAN/ 2/07 12:00 AM L1 SP
2H (1:00)
🕒 MON JAN/01 10:00AM

Date	Start	End	L1/L2
JAN/02	12:00AM	1:00AM	L1

New Program
1/1

4-A) To delete the timer program:

1 Use [▲ / ▼] to select the program you want to delete, then press [ENTER].

2 Use [▲ / ▼] to select "Delete", then press [ENTER].

Selection menu will appear.

3 Use [▲ / ▼] to select "Yes", then press [ENTER].

4-B) To correct the timer program:

1 Use [▲ / ▼] to select the program you want to correct, then press [ENTER].

2 Use [▲ / ▼] to select "Program Change", then press [ENTER].

3 Correct the timer program by using [▲ / ▼ / ◀ / ▶], then press [ENTER].

5) Press [TIMER PROG.] to exit.

6) Press [POWER] to return to the timer standby mode.

To stop the timer recording in process

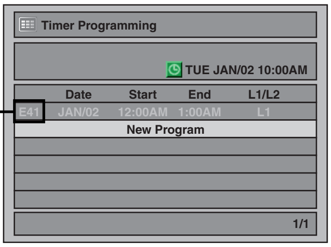
Press [STOP ■] on the front panel of the unit.

[STOP ■] on the remote control is not effective.

Note

- Press **[TIMER PROG.]** to check the timer recording in progress.
  When the timer recording is proceeding, that program will be highlighted with red. In this case, you cannot select any other program.

If the timer program did not complete correctly, the error number appears in the timer programming list.



Timer Programming
🕒 TUE JAN/02 10:00AM

	Date	Start	End	L1/L2
E41	JAN/02	12:00AM	1:00AM	L1

New Program
1/1

Each error number means:

E1-22 E37-39	Recording error other than below	E35	PCA full *1
E23-24	Unrecordable disc	E36	Already finalized video format disc
E25-28	Copy prohibited program	E40	Some portion has not been recorded because of program overlapping. Recording did not start at the start time.
E29	Disc protected		
E30	Disc full		
E31-32	Already 99 titles recorded	E41	Power failed
E33	Already 999 chapters recorded	E42	No disc when recording
E34	No space for Control information		

- A program with the error number is grayed in the timer programming list.
- Once the timer programming list with error line(s) is displayed, or after canceling and setting again the timer standby mode, the program line(s) with error will be cleared.

*1 PCA is a disc's space reserved for recording test.

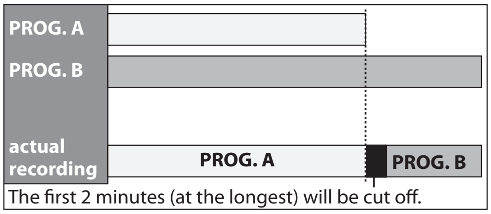
Hints for Timer Recording

- If there is a power failure or this unit has been unplugged for more than 30 seconds, the clock setting and all timer programming will be lost.
- If a disc is not inserted, 🕒 flashes and timer recording cannot be performed. In some cases, 🕒 will appear momentarily around the start point as the unit attempts to record. Please insert a recordable disc.
- When all the timer recording is completed, 🕒 flashes. To play back or eject the recorded disc, press **[POWER]** first, then select the recorded title and press **[PLAY ▶],** or **[OPEN/CLOSE ⏏]** to remove the disc.
- During timer recording or timer standby mode (🕒 will appear), any operations on the unit will not be available. To make these operations available, press **[STOP ■]** on the front panel to cancel the timer recording or **[POWER]** to release timer standby mode (🕒 will disappear).
- To cancel the timer standby mode, press **[POWER]**.
- When the starting and the ending time are the same, the length of the recording will be set for 24 hours. When the disc becomes full during the recording, the unit turns itself off.
- When the programmed starting and ending time are earlier than the current time, the setting will not be accepted and be cleared for redoing.
- If the starting time is earlier and the ending time is later than the current time, the recording will start right after you turn the power off.

The Priority of Overlapped Settings

- Timer program which has the earlier start time will be placed first in the timer program list, and be given priority over the programs with the later start time when timer programs overlap.
- When timer programs overlap, the first 2 minutes (at the longest) of the later recording will be cut off.
- When 2 or more timer programs have the same start time, the program set first will be given priority.
- A timer recording of lower priority will be canceled or start from the middle.
- Check the overlapped timer programmings and change the priority if necessary.

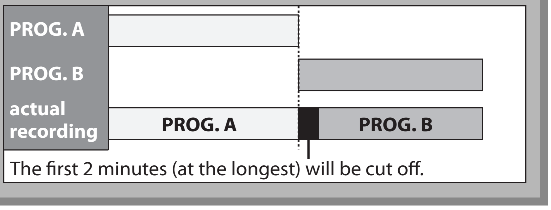
■ **When the starting time is the same:**
A program set previously (PROG. A) has priority.



Note for DVD recording

- When the recording time of 2 programs are overlapped, or the end time of a program and the start time of another program is the same, the first 2 minutes (at the longest) of the subsequent program will be cut off.
- If the cut-off portion comes up to 3 minute or more, this program will be displayed with error number E40 in the timer programming list.

■ **When the end time of the programming currently being recorded and the start time of the subsequent program are same:**
The beginning of the PROG. B may be cut off.



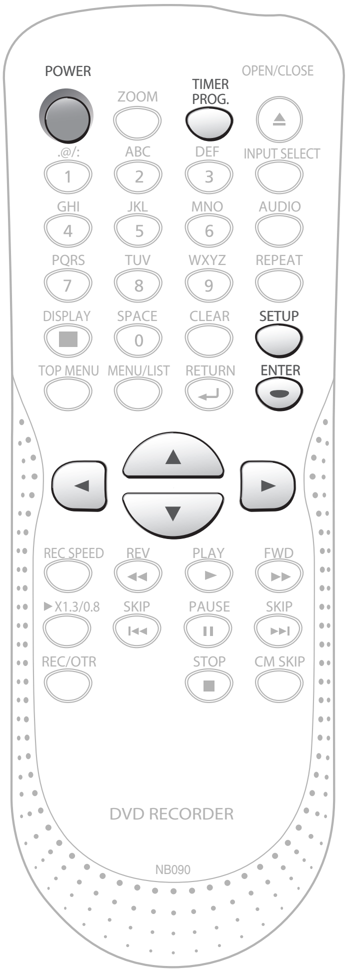
SATELLITE LINK

You can set the unit to start recording whenever it detects the video signal from the external tuner.

Preparing for the satellite link timer recording:

Preparation on the tuner

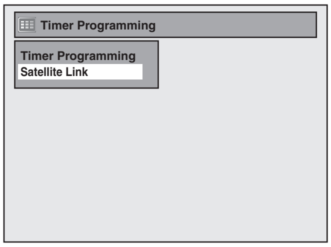
- Satellite link accepts only the connection from L1 (rear) with the external tuner. (The connection from L2 cannot read any signals from the external tuner.)
- The external tuner should be equipped with some kind of timer function. Using timer function of the tuner, set it to output audio/video signals when it comes to the time you want to start recording, and stop output audio/video signals when it comes to the time you want to finish recording. Refer to the tuner's manual on how to set the timer.
- Make sure to set the satellite link standby mode when you finish setting.


POWER
OPEN/CLOSE
ZOOM
TIMER PROG.
.@/:
ABC
DEF
INPUT SELECT
1
2
3
GHI
JKL
MNO
AUDIO
4
5
6
PQRS
TUV
WXYZ
REPEAT
7
8
9
DISPLAY
SPACE
CLEAR
SETUP
0
TOP MENU
MENU/LIST
RETURN
ENTER
REC SPEED
REV
PLAY
FWD
▶X1.3/0.8
SKIP
PAUSE
SKIP
REC/OTR
STOP
CM SKIP
DVD RECORDER
NB090

1 Press [SETUP].

2 Use [▲ / ▼] to select "Timer Programming", then press [ENTER].

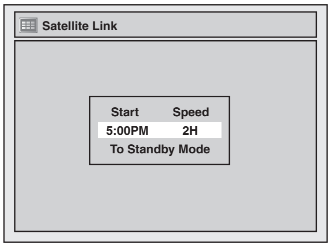
3 Use [▲ / ▼] to select "Satellite Link", then press [ENTER].



Timer Programming

Timer Programming
Satellite Link

4 Use [▲ / ▼] to select the time and recording speed, then press [ENTER].



Satellite Link

Start	Speed
5:00PM	2H

To Standby Mode

5 Use [▲ / ▼] to set the desired starting time, then press [▶].

- The hour can be selected from 1 to 12 with AM or PM.
- Repeat procedures in step 5 to set the desired minutes.
- If you wish to go back to the left, press **[◀]**.

6 Use [▲ / ▼] to select the recording speed.

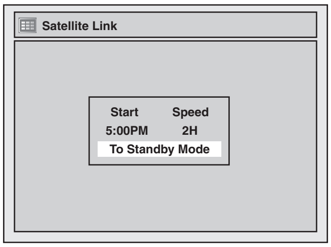
Refer to page 30 for details.

Instructions continue on the next page.

7 Press [ENTER].

“To Standby Mode” is highlighted.

8 Press [ENTER] again.



Satellite Link

Start Speed
5:00PM 2H
To Standby Mode

In a second, the unit will be turned off automatically as it goes into the satellite link standby mode.

To cancel the satellite link function while in the satellite link standby mode:

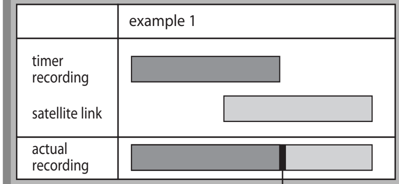
Press **[POWER]** to turn on the unit.

To cancel the satellite link function while the satellite link recording is in progress:

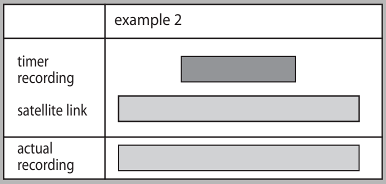
Press **[STOP ■]** *on the front panel of the unit.*

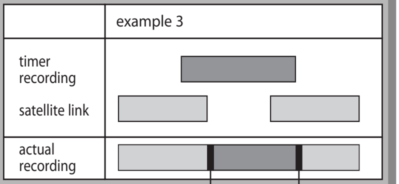
Note

- If the signal of external input breaks up over 5 seconds, satellite link function will be canceled.
- If you have not set the clock, “Clock Setting” menu will appear at step 3. Follow to step 3 in “Clock Setting” on page 22.
- You cannot set the end time for the satellite link timer recording on this unit.
- Recording picture will be distorted if the copy protection signal is being detected during satellite link timer recording.
- You can record the satellite link by using S-video input jacks on the rear panel. Refer to page 39 for more information.
- When a regular timer recording and the satellite link timer recording are overlapped, those recordings are recorded as illustrated below.
- Press **[TIMER PROG.]** during the satellite link timer recording to check the satellite link timer recording in progress.


example 1
timer recording
satellite link
actual recording

The first 2 minutes (at the longest) will be cut off.


example 2
timer recording
satellite link
actual recording

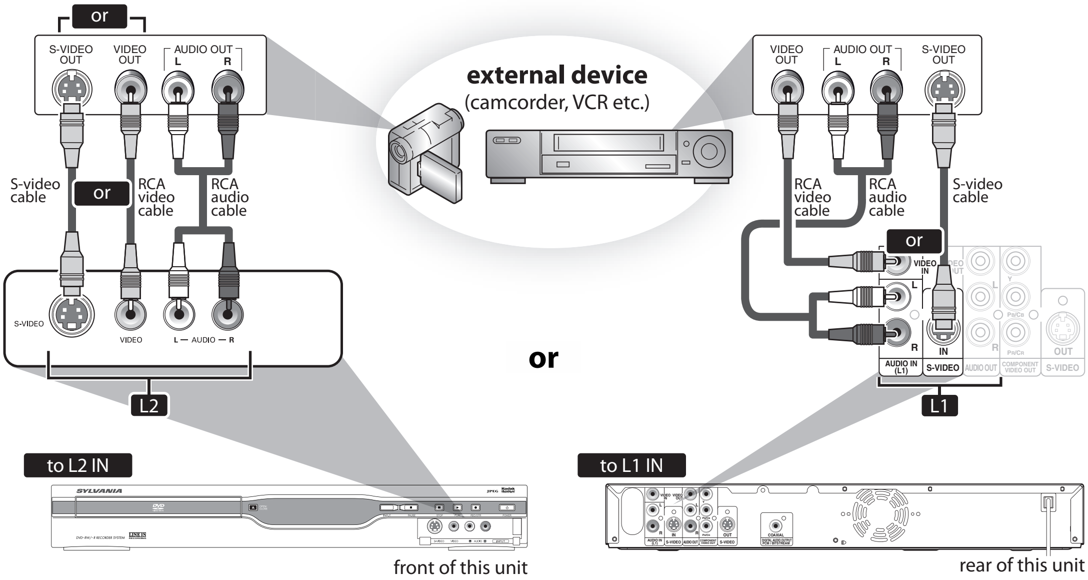

example 3
timer recording
satellite link
actual recording

The first 2 minutes (at the longest) will be cut off.

SETTINGS FOR AN EXTERNAL DEVICE

Connection to an External Device

Connect the external device properly to either L2 (front) or L1 (rear) input jacks of this unit by using S-video or RCA audio / video cables.


or
S-VIDEO OUT
VIDEO OUT
AUDIO OUT L R
S-video cable
or
RCA video cable
RCA audio cable
S-VIDEO
VIDEO
L — AUDIO — R
L2
to L2 IN
front of this unit
external device
(camcorder, VCR etc.)
or
VIDEO OUT
AUDIO OUT L R
S-VIDEO OUT
RCA video cable
RCA audio cable
S-video cable
or
VIDEO IN
L
R
AUDIO IN (L1)
IN
S-VIDEO
L1
to L1 IN
rear of this unit

After making the connection as described above, make sure to select the appropriate video input type by following the steps in “SETTINGS FOR THE VIDEO INPUT” on page 16.

Supplied cables used in this connection are as follows:

- RCA audio cable (L/R) x 1
- RCA video cable x 1

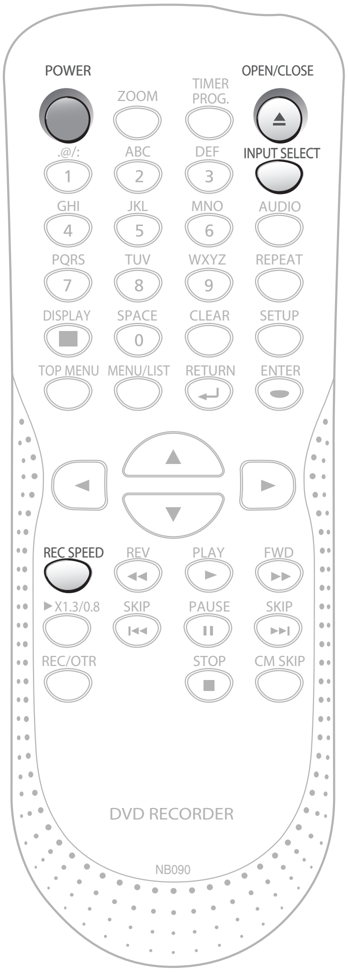
Please purchase the rest of the necessary cables at your local store.

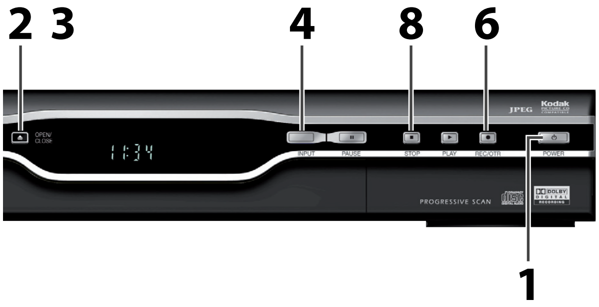
Note

- When connecting an external device of monaural output to this unit, use AUDIO L jack of L2 (Front).

Recording from an External Device

Before recording from an external device, refer to the instructions for the connection on page 39.


POWER
OPEN/CLOSE
ZOOM
TIMER PROG.
.@/:
1
ABC
2
DEF
3
INPUT SELECT
GHI
4
JKL
5
MNO
6
AUDIO
PQRS
7
TUV
8
WXYZ
9
REPEAT
DISPLAY
SPACE
0
CLEAR
SETUP
TOP MENU
MENU/LIST
RETURN
ENTER
REC SPEED
REV
PLAY
FWD
X1.3/0.8
SKIP
PAUSE
SKIP
REC/OTR
STOP
CM SKIP
DVD RECORDER
NB090


2
3
4
8
6
1
OPEN/CLOSE
INPUT
PAUSE
STOP
PLAY
REC/OTR
POWER
JPEG
Kodak
PROGRESSIVE SCAN

1 **Turn on the TV and press [POWER], and be sure to select the input of the TV to which the unit is connected.**

2 **Press [OPEN/CLOSE ▲] to open the disc tray. Place the disc to record on properly.**

3 **Press [OPEN/CLOSE ▲] to close the disc tray.**

It takes awhile to load the disc.

4 **Select the input of the unit which the external device is connected. (L1 or L2)**

- To use the input jacks on the rear of this unit; Select “L1” by using **[INPUT SELECT]** or **[INPUT]**.
- To use the input jacks on the front of this unit; Select “L2” by using **[INPUT SELECT]** or **[INPUT]**.

5 **Press [REC SPEED] to select a recording speed.**

Refer to “Recording Speed” on page 30.

6 **Press [REC/OTR] on the unit to start recording.**

7 **Start playback on the external device to record from.**

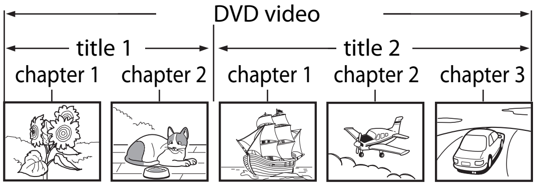
8 **Press [STOP ■] on the unit to stop recording.**

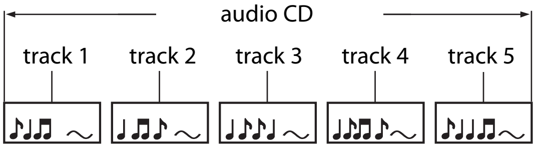
This operation may take awhile to be completed.

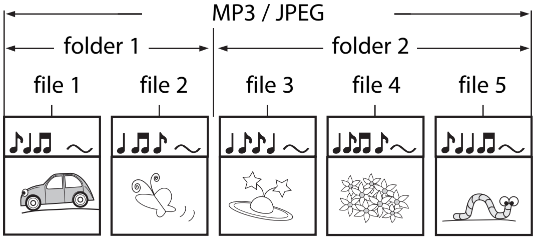
INFORMATION ON PLAYBACK

Structure of Disc Contents

The contents of DVD are generally divided into titles, and the titles are subdivided into chapters.
Audio CDs are divided into tracks.
Data disc contains MP3/JPEG are divided into folders, and the folders are subdivided into files.


DVD video
title 1
title 2
chapter 1
chapter 2
chapter 1
chapter 2
chapter 3


audio CD
track 1
track 2
track 3
track 4
track 5


MP3 / JPEG
folder 1
folder 2
file 1
file 2
file 3
file 4
file 5

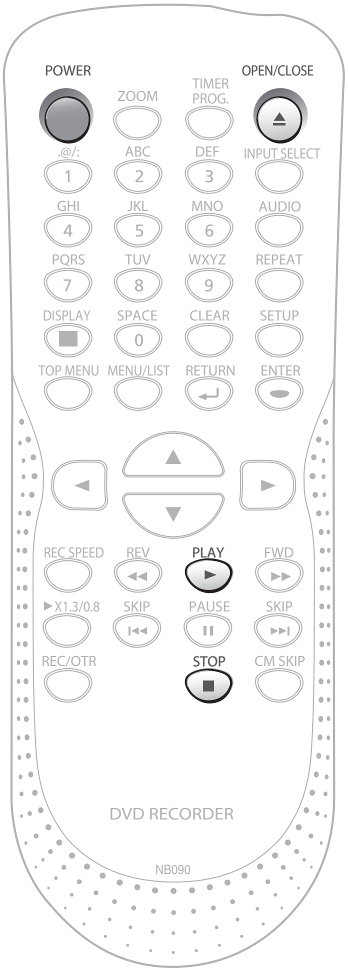
Title:	Divided contents of a DVD video disc.Roughly corresponds to a story title in short stories.
Chapter:	Divided contents of a title. This corresponds to a chapter in a story.
Track:	Divided contents of an audio CD.
Folder:	Divided contents of a MP3/JPEG data disc. Consists of number of files.

Each title, chapter, or track, folder or file is assigned a number, which is called “title number”, “chapter number”, “track number”, “folder number” or “file number” respectively.
Some discs may not have these numbers.

BASIC PLAYBACK

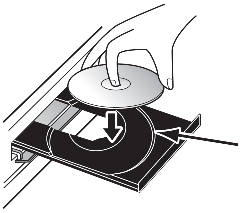
Direct Playback

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


POWER
ZOOM
TIMER PROG.
OPEN/CLOSE
.@/:
ABC
DEF
INPUT SELECT
1
2
3
GHI
JKL
MNO
AUDIO
4
5
6
PQRS
TUV
WXYZ
REPEAT
7
8
9
DISPLAY
SPACE
CLEAR
SETUP
0
TOP MENU
MENU/LIST
RETURN
ENTER
REC SPEED
REV
PLAY
FWD
▶X1.3/0.8
SKIP
PAUSE
SKIP
REC/OTR
STOP
CM SKIP
DVD RECORDER
NB090

1 **Press [POWER].**
Turn on the TV and be sure to select the input to which the unit is connected.

2 **Press [OPEN/CLOSE ▲] to open the disc tray and insert your disc with its label facing up.**



Align the disc to the disc tray guide.

3 **Press [OPEN/CLOSE ▲] to close the disc tray.**

It may take awhile to load the disc completely.

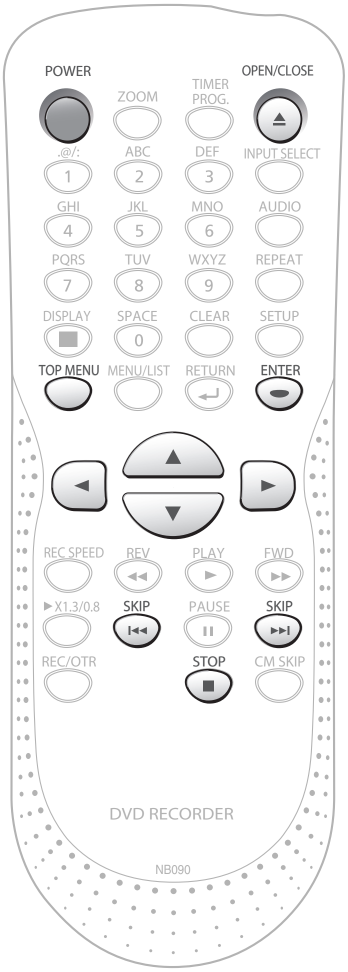
4 **Press [PLAY ▶] to start playback.**
If you are playing back a DVD-video, a menu may appear.
Refer to "Using the Title/Disc Menu" on page 45.

5 **Press [STOP ■] once to stop playback temporarily.**
- Refer to "Resume Playback" on page 46.

Note
- Some discs may start playback automatically.

Playback from the Title List

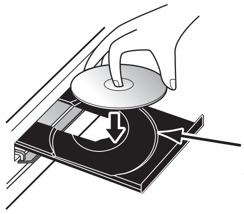
DVD -RW VIDEO MODE DVD -RW VR MODE DVD -R VIDEO MODE


POWER
OPEN/CLOSE
ZOOM
TIMER PROG.
.@/: 1
ABC 2
DEF 3
INPUT SELECT
GHI 4
JKL 5
MNO 6
AUDIO
PQRS 7
TUV 8
WXYZ 9
REPEAT
DISPLAY
SPACE 0
CLEAR
SETUP
TOP MENU
MENU/LIST
RETURN
ENTER
REC SPEED
REV
PLAY
FWD
X1.3/0.8
SKIP
PAUSE
SKIP
REC/OTR
STOP
CM SKIP
DVD RECORDER
NB090

1 Press [POWER].

Turn on the TV and be sure to select the input to which the unit is connected.

2 Press [OPEN/CLOSE ▲] to open the disc tray and insert your disc with its label facing up.



Align the disc to the disc tray guide.

3 Press [OPEN/CLOSE ▲] to close the disc tray.

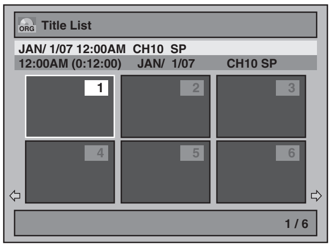
It may take awhile to load the disc completely.

Title list will appear automatically.

- To exit the title list, press **[STOP ■]**.
- To resume the title list, press **[TOP MENU]**.

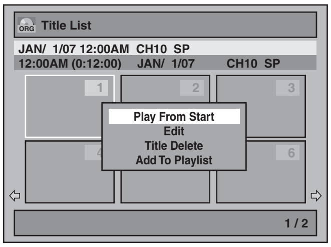
4 Use [▲ / ▼ / ◄ / ►] to select a desired title, then press [ENTER].

e.g.) VR mode DVD-RW original



Title List
JAN/ 1/07 12:00AM CH10 SP
12:00AM (0:12:00) JAN/ 1/07 CH10 SP
1 2 3
4 5 6
1 / 6

5 Use [▲ / ▼] to select "Play From Start", then press [ENTER].



Title List
JAN/ 1/07 12:00AM CH10 SP
12:00AM (0:12:00) JAN/ 1/07 CH10 SP
Play From Start
Edit
Title Delete
Add To Playlist
1 / 2

Playback will start.

6 Press [STOP ■] once to stop playback temporarily.

- Refer to "Resume Playback" on page 46.

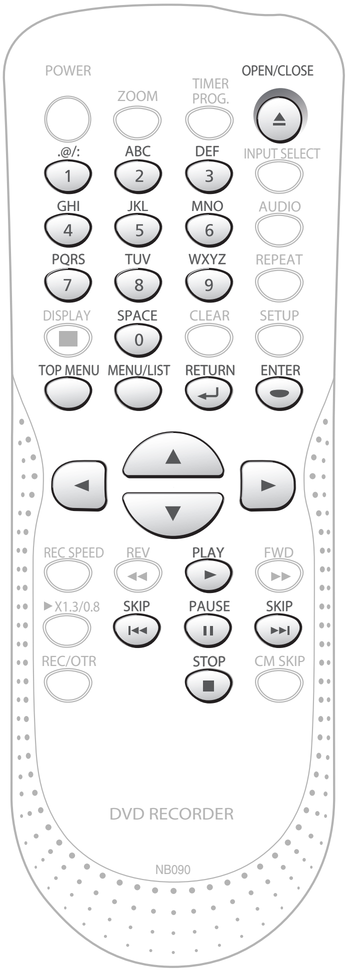
To eject the disc, press **[OPEN/CLOSE ▲]** to open the disc tray, then remove the disc before turning off the unit.

Note

- Some discs may start playback automatically.
- You can also start playback by pressing **[PLAY ►]** instead of **[ENTER]** at step 5.
- At step 4, you can press **[SKIP ►►|]**, or press **[►]** when the title on the lower right of the title list is highlighted to display the next page, and press **[SKIP |◄◄]**, or press **[◄]** when the title on the upper left of the title list is highlighted to display the previous page.

Playing Back an Audio CD and a CD-RW/-R with MP3 / JPEG Files

CD MP3 JPEG


POWER
ZOOM
TIMER PROG.
OPEN/CLOSE
.@/:
1
ABC
2
DEF
3
INPUT SELECT
GHI
4
JKL
5
MNO
6
AUDIO
PQRS
7
TUV
8
WXYZ
9
REPEAT
DISPLAY
SPACE
0
CLEAR
SETUP
TOP MENU
MENU/LIST
RETURN
ENTER
REC SPEED
REV
PLAY
FWD
▶X1.3/0.8
SKIP
PAUSE
SKIP
REC/OTR
STOP
CM SKIP
DVD RECORDER
NB090

1 **Follow steps 1 to 2 in “Direct Playback” on page 42.**

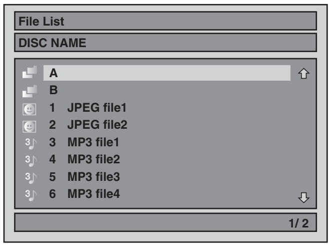
2 **Press [OPEN/CLOSE ▲] to close the disc tray.**

It may take awhile to load the disc completely.

File list will appear automatically.

- To exit the file list, press **[STOP ■]**.
- To resume the file list, press **[TOP MENU]**.

3 **Use [▲ / ▼] to select a desired folder or track/file, then press [ENTER].**


File List
DISC NAME
A
B
1 JPEG file1
2 JPEG file2
3 MP3 file1
4 MP3 file2
5 MP3 file3
6 MP3 file4
1/ 2

When selecting track/file:
Playback will start.

When selecting folder:
The files in the folder will appear.
Use **[▲ / ▼]** to select the file or folder you want to play back, then press **[ENTER]**.

- Press **[PLAY ▶]**, **[ENTER]** or **[▶]** to move to any lower hierarchies.
- Press **[◀]** or **[RETURN ↵]** to move back to the previous hierarchy.

Hints for audio CD tracks and MP3 / JPEG files:

- Folders are shown by 🗀.
- Audio CD tracks are shown by 💿.
- MP3 files are shown by 3♪ .
- JPEG files are shown by ☺ .
- The system can recognize up to 255 folders and, up to 99 tracks/999 files.
- Letters of a file/folder name overflowing the given space will be displayed as “…”.
- If there are no files in the folder, “No Files” will be displayed.

It is recommended that files to be played back in this unit are recorded under the following specifications:

<MP3>

• Sampling frequency	: 44.1 kHz or 48 kHz.
• Constant bit rate	: 112 kbps - 320 kbps

<JPEG>

• Upper limit	: 6,300 x 5,100 dots.
• Lower limit	: 32 x 32 dots.
• File size of image maximum	: 12 MB.

Note

- The audio source of MP3 files cannot be recorded as digital sound by an MD or DAT deck.
- Files whose extension is other than “.mp3(MP3)” or “.jpg / .jpeg(JPEG)” will not be listed.
- Some unplayable folders or files may be listed due to the recording status.
- High-resolution JPEG files take longer to be displayed.
- Progressive JPEG files (JPEG files saved in progressive format) cannot be played back on this unit.
- The JPEG pictures can also rotate by using **[▲ / ▼ / ◀ / ▶]**.

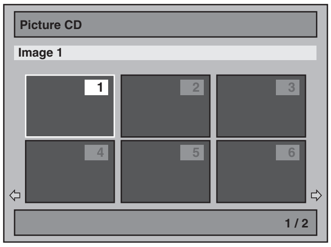
Playing Back an Audio CD and a CD-RW/-R with MP3 JPEG Files (cont'd)

Kodak Picture CD

The Picture CD is a service to convert photographs taken by a conventional film camera into digital data and write the data on a CD. You can enjoy picture images on the TV set by playing back the Picture CDs.

For details of Kodak Picture CD, contact a shop that provides developing service of Kodak Inc.

1) Press [TOP MENU].



- To exit the Picture CD thumbnail List, press **[TOP MENU]** again or press **[STOP ■].**
  Arrow icons mean the title list includes a next or previous page. Use **[◀ / ▶]** in the direction of the icon you wish to follow. You can also quick review the six thumbnails at once between the first and last pages by pressing **[SKIP |◀◀ / ▶▶|].**

2) Use [▲ / ▼ / ◀ / ▶] to select a desired track to be played back, then press [PLAY ▶] or [ENTER].

An image will be played back from the selected track and go to the next one in turn.

3) Press [STOP ■] to stop playback.

Notes on JPEG and Kodak Picture CD:

- After track is displayed for 5 seconds or 10 seconds (set in the "Slide Show" on page 52) the display moves to the next track.
  During JPEG or Kodak Picture CD playback, press **[▶]** or **[◀]** to rotate a picture 90 degrees clockwise or counterclockwise respectively.
  (Not available when the display menu appears.)

Using the Title / Disc Menu

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

DVD may contain a title list, which describes the contents of the disc, or a disc menu, which guides you through the available functions in the disc.

1) Press [MENU/LIST] or [TOP MENU] to call up the title list or disc menu.

2) Use [▲ / ▼ / ◀ / ▶] to make a selection, and then press [ENTER] to enable your selection.

3) Press [STOP ■] to exit the disc menu.

Note

- You can select a numbered menu with **[the Number buttons]** also.
- Menus vary among discs. Refer to the information accompanying the disc for details.
- **[MENU/LIST]** or **[TOP MENU]** will not always effective for all DVDs.

Pause

1) During playback, press [PAUSE ▮▮].

Playback will be paused and sound will be muted.

2) Press [PLAY ▶] to return to the normal playback.

Note

- For DVD, set "Still Mode" to "Field" in "Playback" menu if pictures in the pause mode are blurred. (Refer to page 74.)

SPECIAL PLAYBACK

Resume Playback

You can play back from where you stopped playing back the disc last.

1) During playback, press [STOP ■].

The resume message will appear.

2) Press [PLAY ▶].

In a few seconds, playback will resume from the point at which it stopped last. You can resume playback at the same point even if you turn off the unit.

To cancel the resume playback and start playing back the disc from the beginning, press **[STOP ■]** again while the playback is stopped.

Note
- For MP3/JPEG files, playback will resume from the beginning of the file at which playback was stopped.

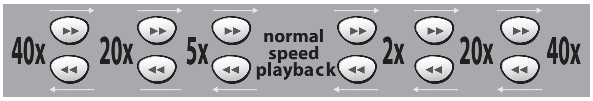
Fast Forward / Fast Reverse Playback

DVD VIDEO | DVD -RW VIDEO MODE | DVD -RW VR MODE | DVD -R VIDEO MODE | CD | MP3

1) During playback, press [FWD ▶▶] or [REV ◀◀].

Every time you press **[FWD ▶▶]** or **[REV ◀◀]**, approximate speed will be changed as follows.

Fast forward or fast reverse playback across titles (for DVD), or files (for MP3 files) is not possible.



For audio CD, MP3 files, approximate speed is fixed at 8x with sound.

2) Press [PLAY ▶] to return to the normal playback.

Note
- Forward/reverse speed will be indicated with icons as follows.

  forward (approx. speed)
  2x: ▶▸
  20x: ▶▸▸
  40x: ▶▸▸▸
  reverse (approx. speed)
  5x: ▶◂
  20x: ▶◂◂
  40x: ▶◂◂◂

Skipping TV Commercials During Playback

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

You can skip TV commercials to enjoy the recorded programs without interrupting.

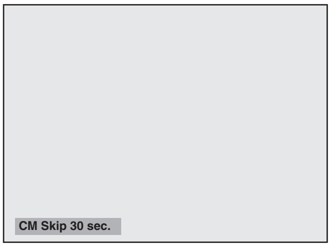
During playback, press [CM SKIP].

Normal playback will start at 30 seconds ahead from the point you press **[CM SKIP]**.

Every time you press **[CM SKIP]**, the searching point will be extended by 30 seconds ahead.

You can press **[CM SKIP]** up to 6 times (180 seconds).

e.g.) Press **[CM SKIP]** once.



(forwarding 30 seconds)

↓

Playback will return to the normal playback.

SPECIAL PLAYBACK

Rapid Playback

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

Rapid playback function is available only during playback.

This function is available only on discs recorded in the Dolby Digital format, and plays back in a slightly faster/ slower speed while keeping the sound quality just as normal playback.

1) During playback, press [►x1.3/0.8].

► ♪:	Press **[►x1.3/0.8]** once during playback. Plays back approximately at 0.8 times of normal playback.
► ♪♪:	Press **[►x1.3/0.8]** twice during playback. Plays back approximately at 1.3 times of normal playback.
►:	Press **[►x1.3/0.8]** thrice to play back in normal speed. No effects.

2) Press [PLAY ►] to resume the normal playback.

Note

- Audio (language) setting cannot be changed while using this mode.
- This feature may not work at some point in a disc.
- Audio is PCM during rapid playback mode except when using digital audio connection.
- When using digital audio connection (COAXIAL), the LPCM sound (2 channel) will be output.

Step by Step Playback

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

1) During playback, press [PAUSE ❚❚].

Playback will be paused and sound will be muted.

2) Press [SKIP ►►❘] repeatedly.

Playback will advance one frame at a time when you press **[SKIP ►►❘]** with the sound muted.

To play back step by step backward:

Press **[SKIP ❘◄◄]** repeatedly.

Every time you press the button, the playback will go backward by one frame.

- Press and hold **[SKIP ❘◄◄]** / **[SKIP ►►❘]** to reverse/ advance continuously.

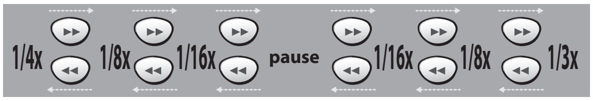
3) Press [PLAY ►] to resume the normal playback.

Slow Forward / Slow Reverse Playback

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

1) During playback, press [PAUSE ❚❚]. Then press [FWD ►►] or [REV ◄◄].

Every time you press **[FWD ►►]** or **[REV ◄◄]**, approximate speed will be changed as follows. (The sound will remain muted.)



To return to the normal playback, press **[PLAY ►]**.

Note

- Forward/reverse speed will be indicated with icons as follows.

forward (approx. speed)
1/16x: ❚►▸
1/8x: ❚►▸▸
1/3x: ❚►▸▸▸
reverse (approx. speed)
1/16x: ❚►◂
1/8x: ❚►◂◂
1/4x: ❚►◂◂◂

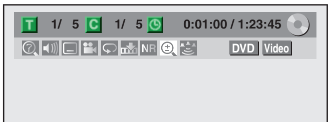
Zoom

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

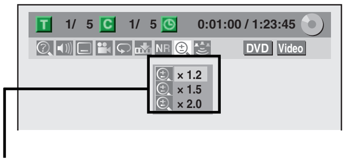
1) During playback, press [DISPLAY].

2) Use [◄ / ►] to select ⊕, then press [ENTER] within 1 second, or wait for 1 second to display the selection menu.

e.g.) DVD-video



3) Use [▲ / ▼] to select a desired zoom factor to zoom, then press [ENTER].

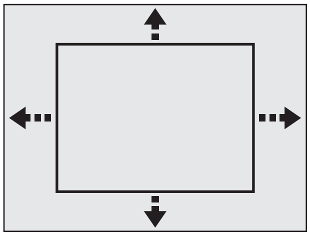


Zoom menu will appear.

There are four options (x1.0, x1.2, x1.5 and x2.0), these are displayed excluding the current zoom rate.

Zoom area will be displayed.

4) Use [▲ / ▼ / ◄ / ►] to select a desired zoom position, then press [ENTER].



Zoom playback will start.

Note

- When selecting a smaller factor than the current one, the zoom area will not be displayed.
- To exit the zoom menu, press **[DISPLAY]** repeatedly.
- To cancel the zoom function, select “x1.0” using **[▲ / ▼]**, then press **[ENTER]** at step 3.
- You cannot slide the zoomed picture on some JPEG files.

Marker Setting

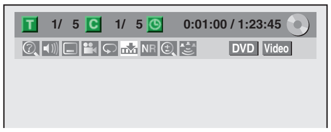
DVD VIDEO | DVD -RW VIDEO MODE | DVD -RW VR MODE | DVD -R VIDEO MODE | CD

This feature allows you to assign a specific point on a disc to be called back later.

1) During playback, press [DISPLAY].

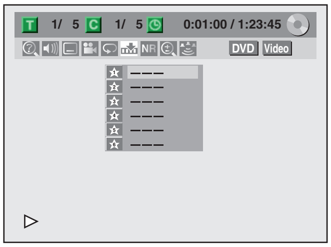
2) Use [◄ / ►] to select ⬇, then press [ENTER] within 1 second, or wait for 1 second to display the marker list.

e.g.) DVD-video



3) Use [▲ / ▼] to select a desired marker number. When it reaches the desired point, press [ENTER].

e.g.) DVD-video



The title (track) number and the time will be displayed.

4) To return to the marker:

Use [▲ / ▼] to select the desired marker number, then press [ENTER].

Note

- To clear a marker, select the marker number to be cleared, then press **[CLEAR]**.
- All markers will be erased when you operate these operations listed below.
  – Opening the disc tray
  – Turning off the power
  – Record on a recordable disc
- You can mark up to 6 points.

SEARCH

Title/Chapter Search

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

Using [SKIP ⏮] / [SKIP ⏭]

1) During playback, press [SKIP ⏭] to skip the current title or chapter and move to the next.

The title or chapter will move forward by one at a time.

- If there is no chapter in one title, the current title will be skipped.

To go back to the beginning of the current title or chapter, press **[SKIP ⏮]**.

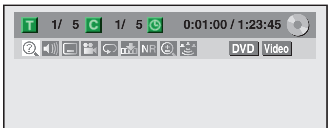
Press it twice in quick successions to go to the previous title or chapter. The title or chapter will move backward one title at a time.

Using [DISPLAY]

1) During playback, press [DISPLAY].

2) Use [◀ / ▶] to select , then press [ENTER].

e.g.) DVD-video



The number next to T will be highlighted.

3) Title:

Use [▲ / ▼] or [the Number buttons] to enter a desired title number to search, then press [ENTER].

Title search will start.

Chapter:

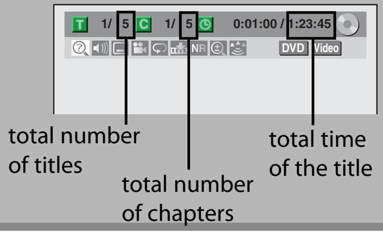
Press [▶] to move to the number next to C for chapter.

Use [▲ / ▼] or [the Number buttons] to enter a desired chapter number to search, then press [ENTER].

After the search, playback will start automatically.

Note

- In search mode display, total numbers of each search contents (title/chapter/time) are shown as a denominator.



Track Search

CD MP3 JPEG

Using [SKIP ⏮] / [SKIP ⏭]

1) During playback, press [SKIP ⏭] to skip the current track/file and move to the next.

The track/file will move forward one at a time.

To go back to the beginning of the current track/file, press **[SKIP ⏮]**.

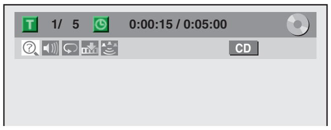
Press it twice in quick successions to go to the previous track/file. The track/file will move backward one at a time.

Using [DISPLAY]

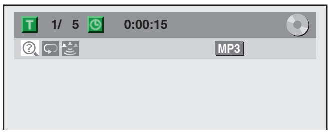
1) During playback, press [DISPLAY].

2) Use [◀ / ▶] to select , then press [ENTER].

e.g.) audio CD



e.g.) MP3 files



The number next to T will be highlighted.

3) Use [▲ / ▼] or [the Number buttons] to enter a desired track/file number to search, then press [ENTER].

After the search, playback will start automatically.

Note

- During CD playback, you can enter a track number directly using **[the Number buttons]** for track search without displaying the menu.

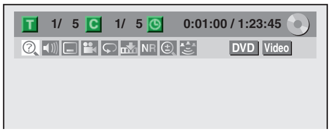
Time Search

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

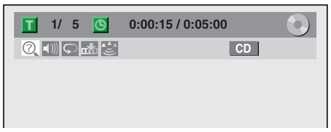
1) During playback, press [DISPLAY].

2) Use [◀ / ▶] to select 🔍, then press [ENTER].

e.g.) DVD-video



e.g.) audio CD



The number next to T will be highlighted.

To move to the number next to 🕒, press [▶].

When time search is not available, 🕒 and time counter are not displayed.

3) Use [▲ / ▼ / ◀ / ▶] or [the Number buttons] to enter a desired time to search, then press [ENTER].

After the search, playback will start automatically.

Note

- Time search is available only in the same track, file or title.

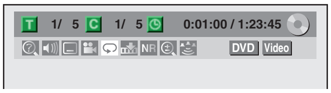
REPEAT/RANDOM/PROGRAM PLAYBACK/SLIDE SHOW

Repeat Playback

Available repeat function may vary depending the discs.

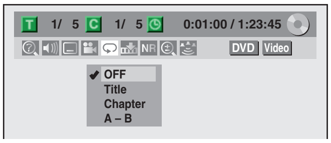
1) During playback press [DISPLAY], then proceed to step 2), or press [REPEAT] then proceed to step 3).

2) Use [◀ / ▶] to select , then press [ENTER] within 1 second, or wait for 1 second to display the selection menu.

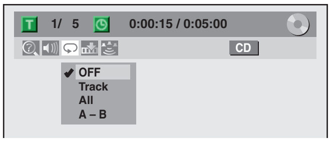

T 1/ 5 C 1/ 5 0:01:00 / 1:23:45
NR
DVD Video

3) Use [▲ / ▼] to select a desired option to repeat, then press [ENTER].

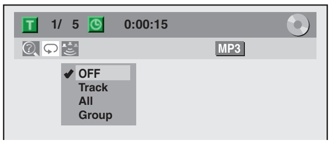
e.g.) DVD-video


T 1/ 5 C 1/ 5 0:01:00 / 1:23:45
NR
DVD Video
✓ OFF
Title
Chapter
A – B

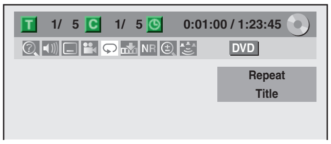
e.g.) audio CD


T 1/ 5 0:00:15 / 0:05:00
CD
✓ OFF
Track
All
A – B

e.g.) MP3/JPEG files


T 1/ 5 0:00:15
MP3
✓ OFF
Track
All
Group

The selected repeat playback will start.


T 1/ 5 C 1/ 5 0:01:00 / 1:23:45
NR
DVD
Repeat
Title

Title:
The current title will be played back repeatedly.

Chapter:
The current chapter will be played back repeatedly.

All:
The current disc will be played back repeatedly.

A-B:
Desired section can be played back repeatedly.
1) Use **[▲ / ▼]** to select "A-B", then press **[ENTER]**.
2) Press **[ENTER]** at the desired starting point A.
3) Press **[ENTER]** at the desired ending point B.

Track:
The current track or file will be played back repeatedly.

Group:
The current folder will be played back repeatedly.

Note

- Point B for the repeat A-B playback should be set within the same chapter or track of point A.
- To cancel the repeat playback, select "OFF" at step 3. The repeat setting will also be canceled when you stop playback.
- You cannot select "Group" during the random playback of MP3/JPEG files.
- Chapter/Track repeat will be canceled whenever **[SKIP ▶▶|]** or **[SKIP |◀◀]** is pressed.

Random Playback

CD MP3 JPEG

You can play back a disc randomly instead of playing back in the original order.

1) Press [SETUP] in stop mode.

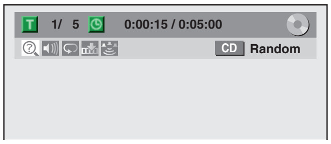
2) Use [▲ / ▼] to select "CD Playback Mode", then press [ENTER].

"CD Playback Mode" menu will appear.

3) Use [▲ / ▼] to select "Random Play", then press [ENTER].

Random playback will start.

e.g.) audio CD


T 1/ 5 0:00:15 / 0:05:00
CD Random

Note

- To cancel random playback, press **[STOP ■]** twice during random playback. "OFF" appears on the display menu.

Program Playback

CD

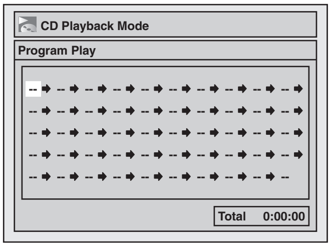
You can program the disc to play back in your desired order.

1) Press [SETUP] in stop mode.

2) Use [▲ / ▼] to select “CD Playback Mode”, then press [ENTER].
“CD Playback Mode” menu will appear.

3) Use [▲ / ▼] to select “Program Play”, then press [ENTER].

4) Use [▲ / ▼] to select a desired track, then press [ENTER] or [▶].



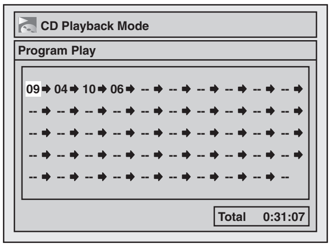
CD Playback Mode
Program Play

```
-- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔
-- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔
-- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔
-- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔
-- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ --
```

Total 0:00:00

Repeat this step until you program all the desired tracks.

5) Press [PLAY ▶].



CD Playback Mode
Program Play

```
09 ➔ 04 ➔ 10 ➔ 06 ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔
-- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔
-- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔
-- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔
-- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ -- ➔ --
```

Total 0:31:07

Program playback will start.

Note

- To erase tracks you selected, press **[CLEAR]** at step 4.
- You can make program settings up to 50 tracks.
- To cancel program playback, press **[STOP ■]** twice during program playback. “OFF” appears on the TV screen.
- You may also select a desired track using **[the Number buttons]** at step 4.

Slide Show

JPEG

You can select the display time between 5 seconds and 10 seconds.

1) Follow steps 1 and 2 in “Program Playback” on the left.

2) Use [▲ / ▼] to select “Slide Show”, then press [ENTER].

3) Use [▲ / ▼] to select the display time, then press [ENTER].

4) Press [SETUP] to exit.

Note

- Large-size JPEG files take a few moments to be displayed.

SELECTING THE FORMAT OF AUDIO AND VIDEO

You can select the format of audio and video as you prefer depending on the contents of the disc you are playing back.

Switching Subtitles

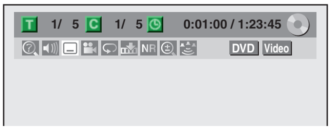
DVD VIDEO

DVD-video may have subtitles in one or more languages. Available subtitle languages can be found on the disc case. You can switch subtitle languages anytime during playback.

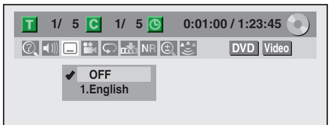
1) During playback, press [DISPLAY].

2) Use [◀ / ▶] to select ▭ , then press [ENTER] within 1 second, or wait for 1 second to display the selection menu.

e.g.) DVD-video



3) Use [▲ / ▼] to select a desired subtitle language, then press [ENTER].



Subtitle will be displayed in the selected language. When “OFF” is selected, subtitle will disappear.

Note

- Some discs will only allow you to change the subtitle from the disc menu. Press **[MENU/LIST]** or **[TOP MENU]** to display the disc menu.
- If a 4-digit language code appears in the subtitle menu, refer to the “LANGUAGE CODE” on page 85.

Switching Audio Soundtrack

DVD VIDEO DVD -RW VR MODE CD

When playing back a DVD-video recorded with 2 or more soundtracks (these are often in different languages), you can switch them during playback.

When playing back audio CD, you can switch “L/R”(stereo), “L”(left) or “R”(right).

1) During playback press [DISPLAY], then proceed to step 2), or press [AUDIO] then proceed to step 3).

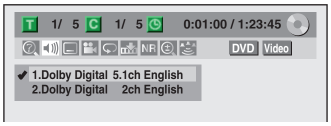
2) Use [◀ / ▶] to select 🔊 , then press [ENTER] within 1 second, or wait for 1 second to display the selection menu.

3) Use [▲ / ▼] to select a desired audio soundtrack or audio channel, then press [ENTER].

For DVD-video or VR mode DVD-RW

- Audio soundtrack will switch.

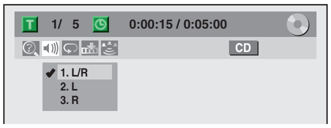
e.g.) DVD-video


T 1/ 5 C 1/ 5 0:01:00 / 1:23:45
NR
DVD Video
✔ 1.Dolby Digital 5.1ch English
2.Dolby Digital 2ch English

- If the title contains both main and sub audio, you can further select “L“ (main), “R“ (sub), “L/R“ (mixed of main and sub).

For audio CD

- Audio channel will switch.



Note

- Some discs will only allow you to change the soundtrack from the disc menu. Press **[MENU/LIST]** or **[TOP MENU]** to display the disc menu.

Switching Virtual Surround System

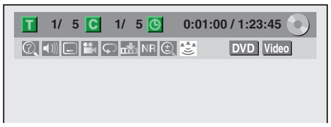
DVD VIDEO DVD -RW VIDEO MODE DVD -RW VR MODE DVD -R VIDEO MODE CD MP3

You can enjoy stereophonic virtual space through your existing 2 channel stereo system.

1) During playback, press [DISPLAY].

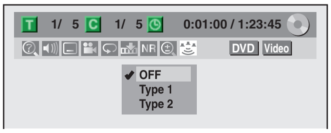
2) Use [◀ / ▶] to select , then press [ENTER] within 1 second, or wait for 1 second to display the selection menu.

e.g.) DVD-video


T 1/ 5 C 1/ 5
0:01:00 / 1:23:45
NR
DVD Video

3) Use [▲ / ▼] to select "OFF", "Type 1" or "Type 2", then press [ENTER].

e.g.) DVD-video


T 1/ 5 C 1/ 5
0:01:00 / 1:23:45
NR
DVD Video
✔ OFF
Type 1
Type 2

OFF : no effect
Type 1 : natural effect
Type 2 : emphasized effect

Note
- Select "OFF" if sound is distorted.
- The setting will be kept when the unit is turned off.

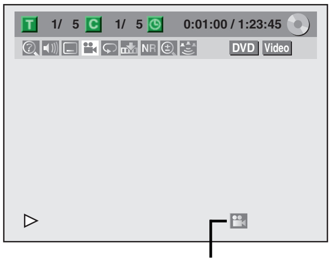
Switching Camera Angles

DVD VIDEO

Some DVD-video have scenes shot from 2 or more angles. Angle information should be on the disc case if the disc contains multi-angle scenes.

1) During playback, press [DISPLAY].

2) Use [◀ / ▶] to select , then press [ENTER].


T 1/ 5 C 1/ 5
0:01:00 / 1:23:45
NR
DVD Video
▷

Angle icon appears when a switching camera angle is available.

Angle will switch each time you press **[ENTER].**

Note
- Angle icon does not appear on the TV screen if you set "Angle Icon" to "OFF" in "Playback" menu. Refer to page 74.

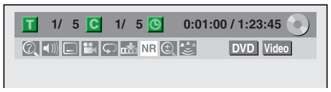
Reducing Block Noise

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

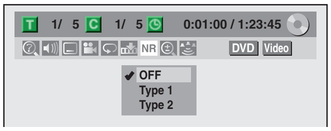
1) During playback, press [DISPLAY].

2) Use [◀ / ▶] to select NR, then press [ENTER] within 1 second, or wait for 1 second to display the selection menu.

e.g.) DVD-video


T 1/ 5 C 1/ 5
0:01:00 / 1:23:45
NR
DVD Video

3) Use [▲ / ▼] to select a desired option, then press [ENTER].


T 1/ 5 C 1/ 5
0:01:00 / 1:23:45
NR
DVD Video
✔ OFF
Type 1
Type 2

Your setting will be activated.

This function reduces noise in the playback picture. If noises appear on the TV screen during playing back discs recorded in long time recording speed such as 6H or 8H, select "Type 1" or "Type 2".

("Type 2" is more effective.)

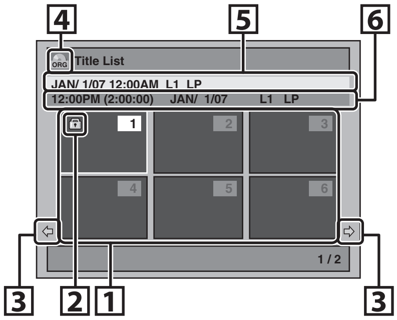
When playing back discs with a few noises such as DVD-video, select "OFF".

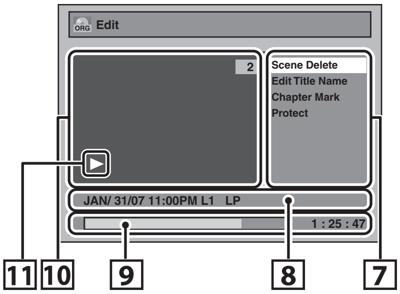
INFORMATION ON DISC EDITING

Guide to a Title List

Title list allows you to check the titles recorded on the disc easily. You can choose a title to play back from this list and easily edit the titles as you prefer.

Press [TOP MENU].





1. **Title list:** List of the titles recorded on the disc, and their information.
2. The protect icon, which appears when the title has been protected. (Original titles only)
3. **Arrow:** Indicating there is a previous / next page.
4. Title list icon, which indicates a type of the displayed title list.
   - ORG : VR(original).
   - PL : VR (Playlist).
   - Video : Video mode.
5. Title name.
6. Title information, which displays recorded year/ date/ month/ time, length of the title, recorded external input mode (L1 or L2), and the recording speed.
7. **Submenu:** Submenus for the selected menu are displayed here.
8. **Title name** (editable)**:** If you do not name the title, the recorded date, time, channel and the recording speed are displayed here.
9. **Progress bar:** Indicating the progress of the playback.
10. **Preview window:** Preview of the selected title is displayed here.
11. **Playback status:** Indicating the current playback status of the selected title.

Press [RETURN ↩] to exit the title list.

Editing Discs

Edit the recorded disc

You will find editing discs is easy. This unit offers convenient edit functions which are possible only with DVD-RW/-R discs.

You can edit the following from a title list.

- **Assigning a name to a title**
- **Dividing a title**
- **Combining titles**
- **Adding titles to a playlist**
- **Erasing all playlist**
- **Setting or releasing the title protection**
- **Adding or deleting chapter marks**
- **Deleting titles or parts of titles**

(Possible editing functions depend on the recording format and editing method.)

Original and playlist (VR mode)

For VR mode DVD-RW, you can edit the recordings in playlist without changing the original recordings. Playlist does not take up much disc space. After you make a recording to VR mode DVD-RW, a playlist will be created automatically.

What “Original” or “Playlist” is for?

Throughout this manual, you will find original and playlist which refer to the actual content and the edited version.

- **Original** content refers to what’s actually recorded on the VR mode DVD-RW.
- **Playlist** content refers to the edited version of the VR mode DVD-RW; how the original content is to be played back.

Finalizing a disc

- This will allow a disc that is recorded on this unit to be played back on other DVD player — without finalization it will not be playable on other DVD player.
- After finalizing DVD-RW/-R, you cannot edit any information that is on that disc.

Note

- Once a disc is finalized, editing the disc or recording to the disc will not be available (except DVD-RW in VR mode).
- A playlist is not available with the DVD-R and DVD-RW in video mode.

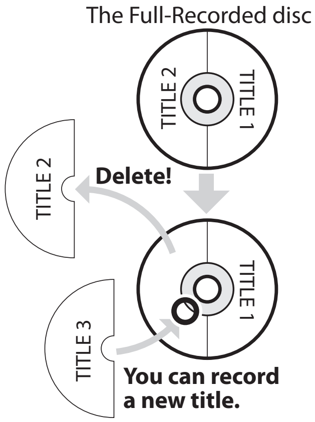
DELETING TITLES

Notes for deleting titles

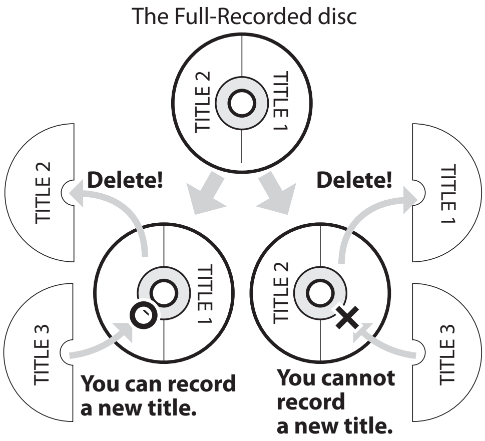
After the disc is fully recorded:

DVD-RW

- **When a title is deleted from DVD-RW in VR mode, the recordable disc space will be increased.**

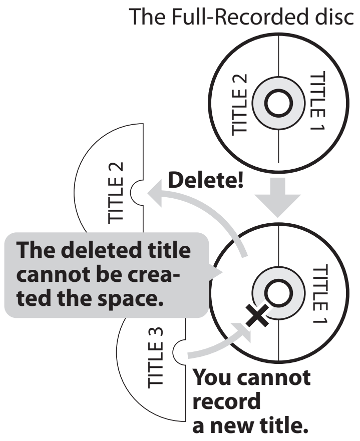

The Full-Recorded disc
TITLE 2
TITLE 1
TITLE 2
Delete!
TITLE 1
TITLE 3
You can record a new title.

- **When the last title is deleted from DVD-RW in video mode, the recordable space will be increased.**


The Full-Recorded disc
TITLE 2
TITLE 1
TITLE 2
Delete!
Delete!
TITLE 1
TITLE 1
TITLE 2
TITLE 3
TITLE 3
You can record a new title.
You cannot record a new title.

DVD-R

- **When a title is deleted from DVD-R, the recordable space will NOT be increased.**


The Full-Recorded disc
TITLE 2
TITLE 1
TITLE 2
Delete!
The deleted title cannot be crea-ted the space.
TITLE 1
TITLE 3
You cannot record a new title.

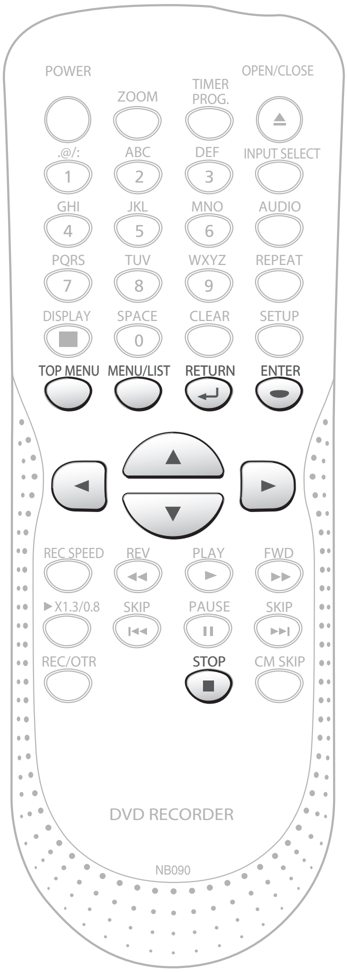
Once all editings are made, press **[RETURN ↵]** in several times to exit the editing mode. “Writing to Disc” appears momentarily. It also appears when pressing **[OPEN/CLOSE ▲]** or **[POWER]** before exiting the editing mode after editing.

DELETING TITLES

You can delete titles which you do not need anymore.

Please be advised that the titles once deleted cannot be brought back to the disc.

Be sure to read “Notes for deleting titles” on page 56 before you delete the title.


POWER
OPEN/CLOSE
ZOOM
TIMER PROG.
.@/:
ABC
DEF
INPUT SELECT
1
2
3
GHI
JKL
MNO
AUDIO
4
5
6
PQRS
TUV
WXYZ
REPEAT
7
8
9
DISPLAY
SPACE
CLEAR
SETUP
0
TOP MENU
MENU/LIST
RETURN
ENTER
REC SPEED
REV
PLAY
FWD
►X1.3/0.8
SKIP
PAUSE
SKIP
REC/OTR
STOP
CM SKIP
DVD RECORDER
NB090

1 In stop mode, press [TOP MENU].

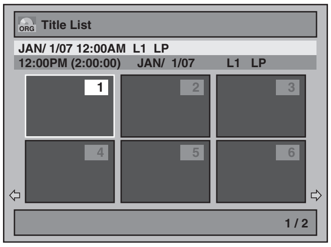
Title list, original or playlist will appear.

- For DVD-RW VR mode, press **[MENU/LIST]** to switch between “Original” and “Playlist” if the disc is recorded in VR mode.

---

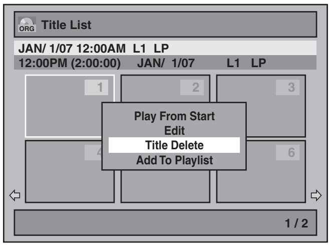
2 Use [▲ / ▼/◄ / ►] to select a desired title, then press [ENTER].

e.g.) VR mode DVD-RW original


ORG
Title List
JAN/ 1/07 12:00AM L1 LP
12:00PM (2:00:00) JAN/ 1/07 L1 LP
1
2
3
4
5
6
1 / 2

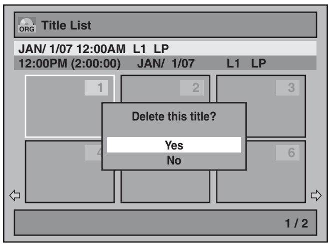
---

3 Use [▲ / ▼] to select “Title Delete”, then press [ENTER].


ORG
Title List
JAN/ 1/07 12:00AM L1 LP
12:00PM (2:00:00) JAN/ 1/07 L1 LP
1
2
3
6
Play From Start
Edit
Title Delete
Add To Playlist
1 / 2

---

4 Use [▲ / ▼] to select “Yes”, then press [ENTER].


ORG
Title List
JAN/ 1/07 12:00AM L1 LP
12:00PM (2:00:00) JAN/ 1/07 L1 LP
1
2
3
6
Yes
No
1 / 2

Delete this title?

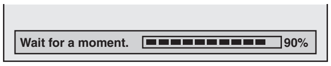
After that, “Are you sure?” will appear, select “Yes” and then press **[ENTER]**.

Title will be deleted.

---

5 Press [RETURN ↵] or [STOP ■] to exit.

Data will be written onto the disc momentarily.



Wait for a moment.

This operation may take awhile to be completed.

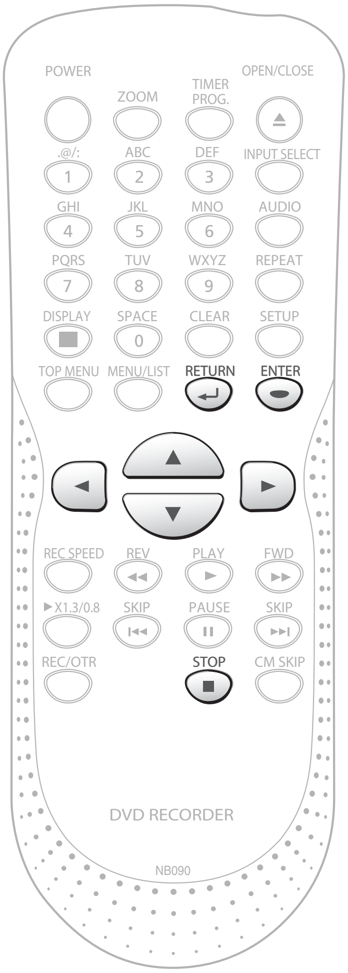
CREATING/DELETING PLAYLIST

Adding Titles to a Playlist

DVD -RW VR MODE Playlist

For VR mode DVD-RW, you can create the playlist as you wish.

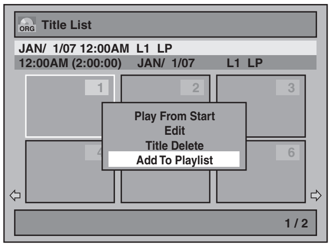
You can add up to 99 titles to a playlist (as long as the total number of the playlist does not exceed 999 chapters).


POWER
ZOOM
TIMER PROG.
OPEN/CLOSE
.@/: 1
ABC 2
DEF 3
INPUT SELECT
GHI 4
JKL 5
MNO 6
AUDIO
PQRS 7
TUV 8
WXYZ 9
REPEAT
DISPLAY
SPACE 0
CLEAR
SETUP
TOP MENU
MENU/LIST
RETURN
ENTER
REC SPEED
REV
PLAY
FWD
▶X1.3/0.8
SKIP
PAUSE
SKIP
REC/OTR
STOP
CM SKIP
DVD RECORDER
NB090

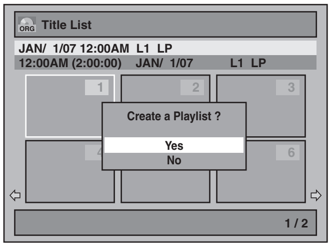
1 **Follow the step 1 in “DELETING TITLES” on page 57 to display the original.**

2 **Use [▲ / ▼/◀ / ▶] to select the desired title, then press [ENTER].**

3 **Use [▲ / ▼] to select “Add To Playlist”, then press [ENTER].**


Title List
JAN/ 1/07 12:00AM L1 LP
12:00AM (2:00:00) JAN/ 1/07 L1 LP
ORG
1
2
3
4
6
Play From Start
Edit
Title Delete
Add To Playlist
1 / 2

4 **Use [▲ / ▼] to select “Yes”, then press [ENTER].**


Title List
JAN/ 1/07 12:00AM L1 LP
12:00AM (2:00:00) JAN/ 1/07 L1 LP
Create a Playlist ?
ORG
1
2
3
4
6
Yes
No
1 / 2

The title is added to playlist.

5 **Press [RETURN ↵] or [STOP ■] to exit.**

Writing on the disc starts.

It may take awhile to write the data on a disc.

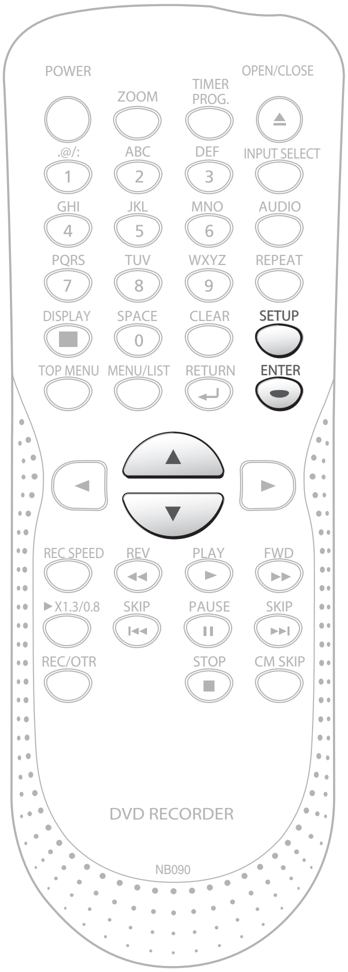
Note

- To delete a title from the playlist, refer to “DELETING TITLES” on page 57.
- To delete all titles in the playlist, refer to “Erasing All Playlist” on page 59.
- When a playlist contains 99 titles or more, or 999 chapters or more, “Add to Playlist” cannot be selected.

Erasing All Playlist

DVD -RW VR MODE Playlist

A playlist can be deleted if it is no longer needed.

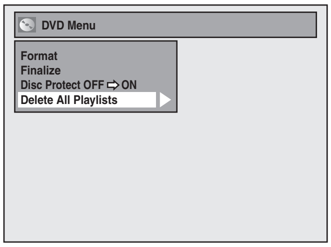

POWER
OPEN/CLOSE
ZOOM
TIMER PROG.
.@/:
1
ABC
2
DEF
3
INPUT SELECT
GHI
4
JKL
5
MNO
6
AUDIO
PQRS
7
TUV
8
WXYZ
9
REPEAT
DISPLAY
SPACE
0
CLEAR
SETUP
TOP MENU
MENU/LIST
RETURN
ENTER
REC SPEED
REV
PLAY
FWD
▶X1.3/0.8
SKIP
PAUSE
SKIP
REC/OTR
STOP
CM SKIP
DVD RECORDER
NB090

1 **Press [SETUP].**

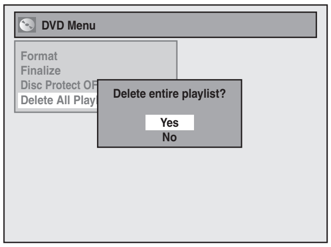
Main menu will appear.

2 **Use [▲ / ▼] to select “DVD Menu”, then press [ENTER].**

3 **Use [▲ / ▼] to select “Delete All Playlists”, then press [ENTER].**


DVD Menu
Format
Finalize
Disc Protect OFF ⇨ ON
Delete All Playlists

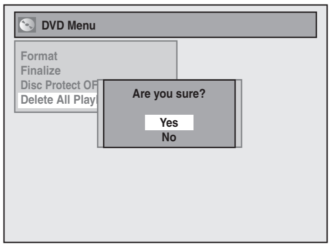
4 **Use [▲ / ▼] to select “Yes”, then press [ENTER].**


DVD Menu
Format
Finalize
Disc Protect OF
Delete All Play

Delete entire playlist?

Yes
No

“Are you sure?” will appear.
Use **[▲ / ▼]** to select “Yes” and then press **[ENTER]**


DVD Menu
Format
Finalize
Disc Protect OF
Delete All Play

Are you sure?

Yes
No

Playlist is deleted.

Writing on the disc starts.
It may take awhile to write the data on a disc.

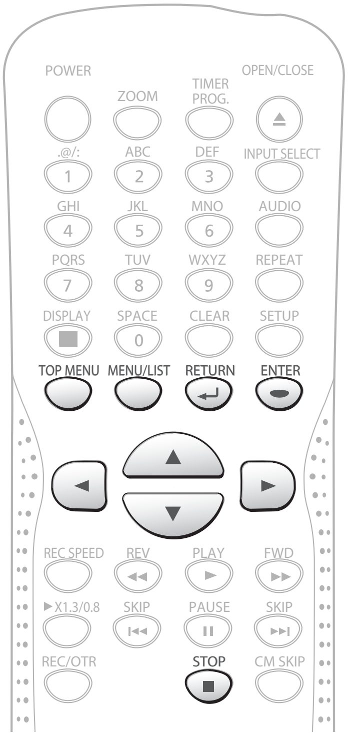
Note

- Deleting a playlist will not increase the available recording time on the disc.

EDITING DISCS

Putting Names on Titles

You can put a name on the disc and change it from this menu.


POWER
OPEN/CLOSE
ZOOM
TIMER PROG.
.@/:
1
ABC
2
DEF
3
INPUT SELECT
GHI
4
JKL
5
MNO
6
AUDIO
PQRS
7
TUV
8
WXYZ
9
REPEAT
DISPLAY
SPACE
0
CLEAR
SETUP
TOP MENU
MENU/LIST
RETURN
ENTER
REC SPEED
REV
PLAY
FWD
▶X1.3/0.8
SKIP
PAUSE
SKIP
REC/OTR
STOP
CM SKIP

1 In stop mode, press [TOP MENU].

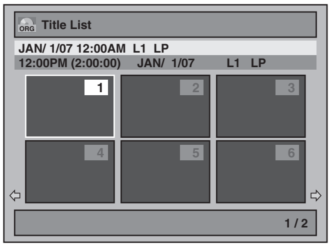
Title list, original or playlist will appear.

- For DVD-RW VR mode, press **[MENU/LIST]** to switch between “Original” and “Playlist” if the disc is recorded in VR mode.

---

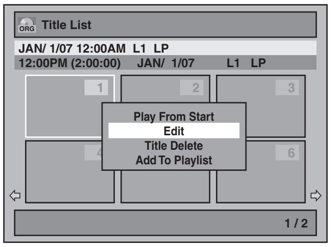
2 Use [▲ / ▼/◀ / ▶] to select a desired title, then press [ENTER].

e.g.) VR mode DVD-RW original

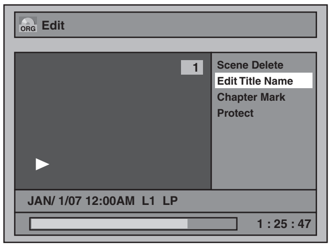

ORG Title List
JAN/ 1/07 12:00AM L1 LP
12:00PM (2:00:00) JAN/ 1/07 L1 LP
1
2
3
4
5
6
1 / 2

---

3 Use [▲ / ▼] to select “Edit”, then press [ENTER].

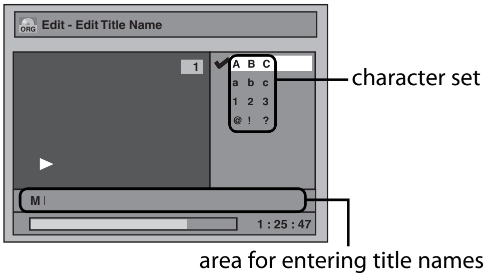

ORG Title List
JAN/ 1/07 12:00AM L1 LP
12:00PM (2:00:00) JAN/ 1/07 L1 LP
1
2
3
4
6
Play From Start
Edit
Title Delete
Add To Playlist
1 / 2

4 Use [▲ / ▼] to select “Edit Title Name”, then press [ENTER].


ORG Edit
1
Scene Delete
Edit Title Name
Chapter Mark
Protect
JAN/ 1/07 12:00AM L1 LP
1 : 25 : 47

---

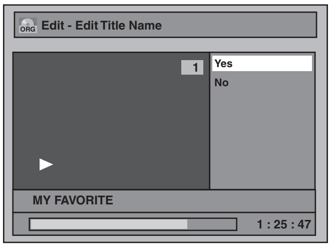
5 To enter a title name, follow the steps of “Guide to Edit Title Name” on page 61.


ORG Edit - Edit Title Name
1
A B C
a b c
1 2 3
@ ! ?
M
1 : 25 : 47
character set
area for entering title names

When you finish entering a title name, press **[ENTER]**.

---

6 Use [▲ / ▼] to select “Yes”, then press [ENTER].


ORG Edit - Edit Title Name
1
Yes
No
MY FAVORITE
1 : 25 : 47

The name you entered will be activated for the title.

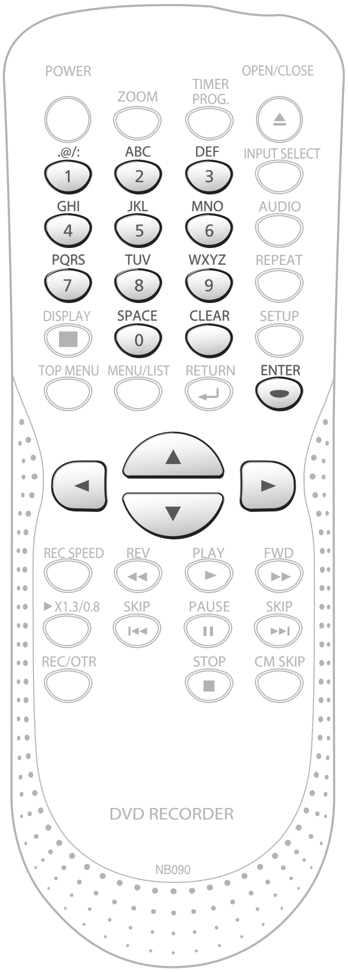
---

7 Press [RETURN ↵] and then [RETURN ↵] or [STOP ■] to exit.

Data will be written onto the disc momentarily.

This operation may take awhile to be completed.

Putting Names on Titles (cont’d)


POWER
ZOOM
TIMER PROG.
OPEN/CLOSE
.@/:
ABC
DEF
INPUT SELECT
1
2
3
GHI
JKL
MNO
AUDIO
4
5
6
PQRS
TUV
WXYZ
REPEAT
7
8
9
DISPLAY
SPACE
CLEAR
SETUP
0
TOP MENU
MENU/LIST
RETURN
ENTER
REC SPEED
REV
PLAY
FWD
▶X1.3/0.8
SKIP
PAUSE
SKIP
REC/OTR
STOP
CM SKIP
DVD RECORDER
NB090

Guide to Edit Title Name

1) Use [▲ / ▼] to select a desired character set, then press [ENTER].

2) Follow the list below, use [the Number buttons] repeatedly until the desired letter appears.

Select / Press	ABC	abc	123	@ ! ?
0	<space>	<space>	0	<space>
1	(*1)	(*1)	1	! ” # $ % & ’ ( ) * + , - . / : ; < = > ? @ [ ] ^ _ { | }
2	ABC	abc	2	(*2)
3	DEF	def	3	(*2)
4	GHI	ghi	4	(*2)
5	JKL	jkl	5	(*2)
6	MNO	mno	6	(*2)
7	PQRS	pqrs	7	(*2)
8	TUV	tuv	8	(*2)
9	WXYZ	wxyz	9	(*2)

*1 Press 1, character set will be changed to the “ @!? ” mode automatically.

*2 Press 2 to 9, character set will be changed to the previous input mode automatically.

- To delete letters, press **[CLEAR]** repeatedly. Press and hold **[CLEAR]** to delete all letters.
- Use [◀ / ▶] to move the cursor to the left and right.
- You can enter up to 30 letters.

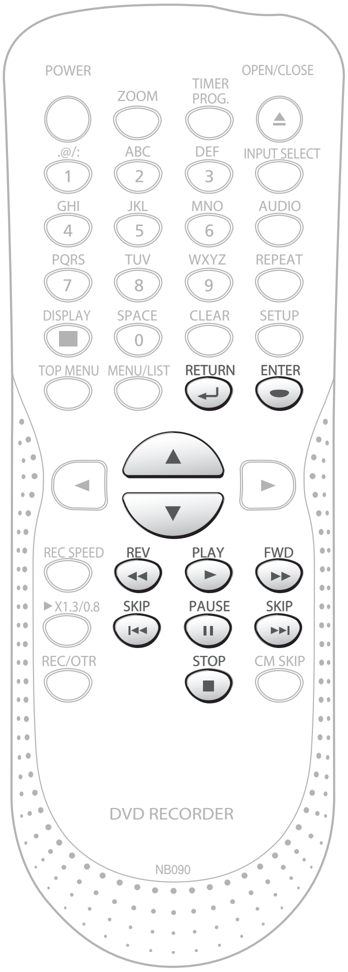
Note

- Undefined letters in a title name are shown by “*”. If you delete them, adjoining letters may change to “*” or other.

Setting or Clearing Chapter Marks

DVD -RW VR MODE Original DVD -RW VR MODE Playlist

You can put chapter marks in each title. Once a chapter is marked, you can use it for the chapter search feature.


POWER
ZOOM
TIMER PROG.
OPEN/CLOSE
.@/:
ABC
DEF
INPUT SELECT
1
2
3
GHI
JKL
MNO
AUDIO
4
5
6
PQRS
TUV
WXYZ
REPEAT
7
8
9
DISPLAY
SPACE
CLEAR
SETUP
0
TOP MENU
MENU/LIST
RETURN
ENTER
REC SPEED
REV
PLAY
FWD
▶X1.3/0.8
SKIP
PAUSE
SKIP
REC/OTR
STOP
CM SKIP
DVD RECORDER
NB090

1 **Follow steps 1 to 3 in “Putting Names on Titles” on page 60 to display “Edit” menu.**

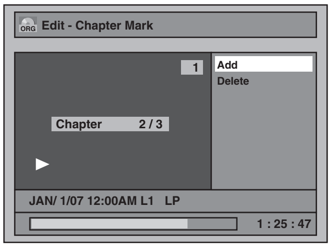
2 **Use [▲ / ▼] to select “Chapter Mark”, then press [ENTER].**

Submenu will appear.

3 **Use [SKIP ⏮ / ⏭], [REV ◀◀], [FWD ▶▶], [PLAY ▶] and [PAUSE ❚❚] to find the point where you will create a new chapter mark. Or, use [SKIP ⏮ / ⏭] to find a chapter mark that you wish to delete.**

4 **Use [▲ / ▼] to select “Add” or “Delete”, then press [ENTER].**

e.g.) VR mode DVD-RW original



ORG Edit - Chapter Mark

1

Add
Delete

Chapter 2 / 3

▶

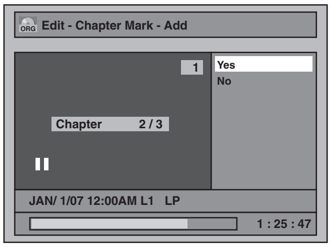
JAN/ 1/07 12:00AM L1 LP

1 : 25 : 47

5 **Use [▲ / ▼] to select “Yes”, then press [ENTER].**

If you select “Add” at step 4, a new chapter mark will be added, and if you select “Delete” at step 4, the chapter mark will be deleted.

e.g.) Add



ORG Edit - Chapter Mark - Add

1

Yes
No

Chapter 2 / 3

❚❚

JAN/ 1/07 12:00AM L1 LP

1 : 25 : 47

A new chapter mark will be added.

6 **Press [RETURN ↵].**

7 **Press [RETURN ↵] again and then [RETURN ↵] or [STOP ■] to exit.**

Data will be written onto the disc momentarily.

This operation may take awhile to be completed.

Note

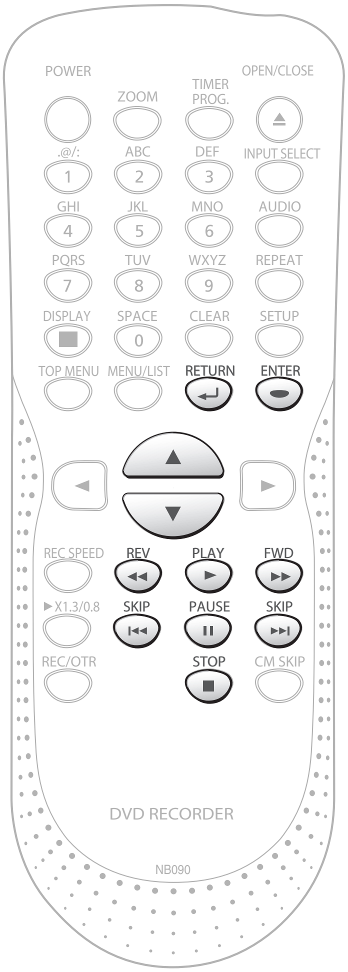
- The maximum number of chapter for VR mode DVD-RW is 999 chapters per entire original and playlist.
- Besides the above-mentioned, it is not likely to be able to add according to recorded time and number of chapters.

Deleting a Part of a Title

DVD -RW VR MODE Original DVD -RW VR MODE Playlist

You can delete a specific part of a title.

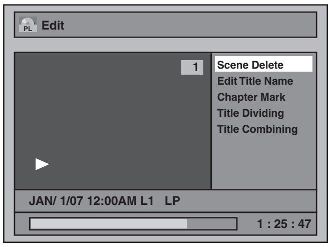
Even when parts of title are deleted from the playlist, the original title will remain as it is.


POWER
OPEN/CLOSE
ZOOM
TIMER PROG.
.@/:
ABC
DEF
INPUT SELECT
1
2
3
GHI
JKL
MNO
AUDIO
4
5
6
PQRS
TUV
WXYZ
REPEAT
7
8
9
DISPLAY
SPACE
CLEAR
SETUP
0
TOP MENU
MENU/LIST
RETURN
ENTER
REC SPEED
REV
PLAY
FWD
▶X1.3/0.8
SKIP
PAUSE
SKIP
REC/OTR
STOP
CM SKIP
DVD RECORDER
NB090

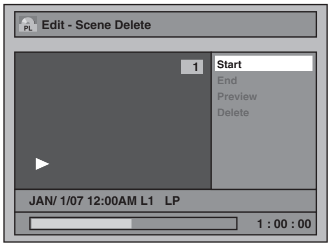
1 **Follow the steps 1 to 3 in "Putting Names on Titles" on page 60 to display the "Edit" menu.**

2 **Use [▲ / ▼] to select "Scene Delete", then press [ENTER].**

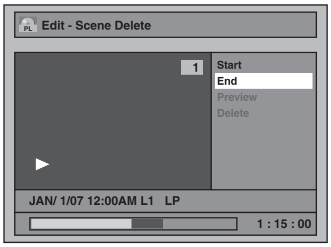
e.g.) VR mode DVD-RW playlist.


Edit
1
Scene Delete
Edit Title Name
Chapter Mark
Title Dividing
Title Combining
JAN/ 1/07 12:00AM L1 LP
1 : 25 : 47

3 **Use [SKIP |◀◀ / ▶▶|], [REV ◀◀], [FWD ▶▶], [PLAY ▶] and [PAUSE ❚❚] to find the start point, then press [ENTER].**


Edit - Scene Delete
1
Start
End
Preview
Delete
JAN/ 1/07 12:00AM L1 LP
1 : 00 : 00

Then use [SKIP |◀◀ / ▶▶|], [REV ◀◀], [FWD ▶▶], [PLAY ▶] and [PAUSE ❚❚] again to move to the end point, and press [ENTER].

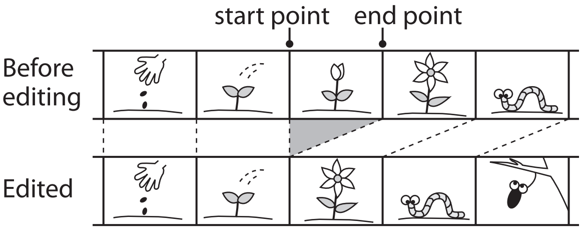

Edit - Scene Delete
1
Start
End
Preview
Delete
JAN/ 1/07 12:00AM L1 LP
1 : 15 : 00

The cursor will move to "Preview".

The bar at the bottom of the screen indicates the total and the elapsed time of the title, and the area selected for deletion is indicated in red.

You can check the preview by pressing **[ENTER]**.

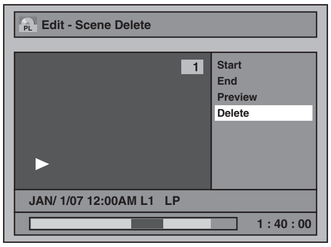
- Before and after 5 seconds of the deleted point will be playback for preview.


start point
end point
Before editing
Edited

Instructions continue on the next page.

Deleting a Part of a Title (cont'd)

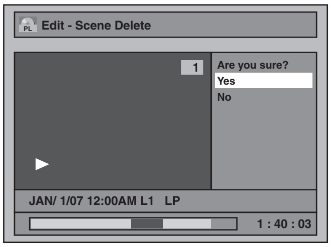
4 Use [▲ / ▼] to select "Delete" then press [ENTER].


Edit - Scene Delete
1
Start
End
Preview
Delete
JAN/ 1/07 12:00AM L1 LP
1 : 40 : 00

---

5 Use [▲ / ▼] to select "Yes" then press [ENTER].

"Are you sure?" will appear. Select "Yes" using **[▲ / ▼]** and then press **[ENTER]**.


Edit - Scene Delete
1
Are you sure?
Yes
No
JAN/ 1/07 12:00AM L1 LP
1 : 40 : 03

The part of the title is deleted.

---

6 Press [RETURN ↵] and then [RETURN ↵] or [STOP ■] to exit.

Data will be written onto the disc momentarily.

This operation may take awhile to be completed.

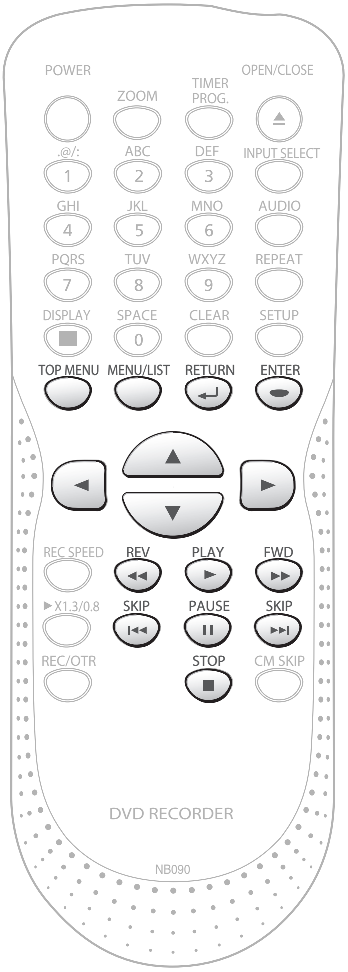
Note

- When a scene is deleted from an original, the scene on the playlist will also be deleted.
- You cannot select "Scene Delete" if the number of chapter marks in the original or playlist is more than 999.
- The recordable disc space will not increase even after deleting a part of a title on the playlist.

Dividing a Title

DVD -RW VR MODE Playlist

You can divide one title into 2 new titles.


POWER
ZOOM
TIMER PROG.
OPEN/CLOSE
.@/: 1
ABC 2
DEF 3
INPUT SELECT
GHI 4
JKL 5
MNO 6
AUDIO
PQRS 7
TUV 8
WXYZ 9
REPEAT
DISPLAY
SPACE 0
CLEAR
SETUP
TOP MENU
MENU/LIST
RETURN
ENTER
REC SPEED
REV
PLAY
FWD
▶X1.3/0.8
SKIP
PAUSE
SKIP
REC/OTR
STOP
CM SKIP
DVD RECORDER
NB090

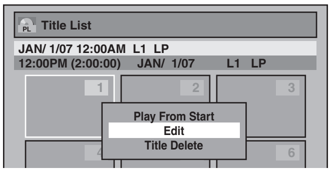
1 **In stop mode, press [TOP MENU].**

- For VR mode DVD-RW, press **[MENU/LIST]** to select “Playlist”.

2 **Use [▲ / ▼/◀ / ▶] to select a desired title, then press [ENTER].**

3 **Use [▲ / ▼] to select “Edit”, then press [ENTER].**

e.g.) VR mode DVD-RW playlist


Title List

JAN/ 1/07 12:00AM L1 LP

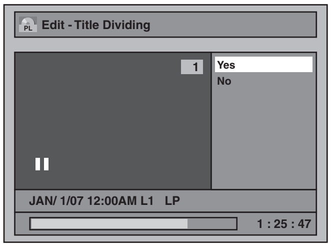
12:00PM (2:00:00) JAN/ 1/07 L1 LP

1
2
3
4
6
Play From Start
Edit
Title Delete

4 **Use [SKIP ⏮], [SKIP ⏭], [REV ◀◀], [FWD ▶▶], [PAUSE ❚❚] and [PLAY ▶] to decide the point at which you will divide the title.**

5 **Use [▲ / ▼] to select “Title Dividing”, then press [ENTER].**

6 **Use [▲ / ▼] to select “Yes”, then press [ENTER].**


Edit - Title Dividing

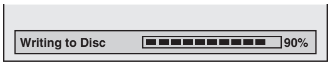
JAN/ 1/07 12:00AM L1 LP

1 : 25 : 47

The title will be divided into 2 new titles.
Both title names are identical.

7 **Press [RETURN ↵] or [STOP ■] to exit.**

Data will be written onto the disc momentarily.


Writing to Disc 90%

This operation may take awhile to be completed.

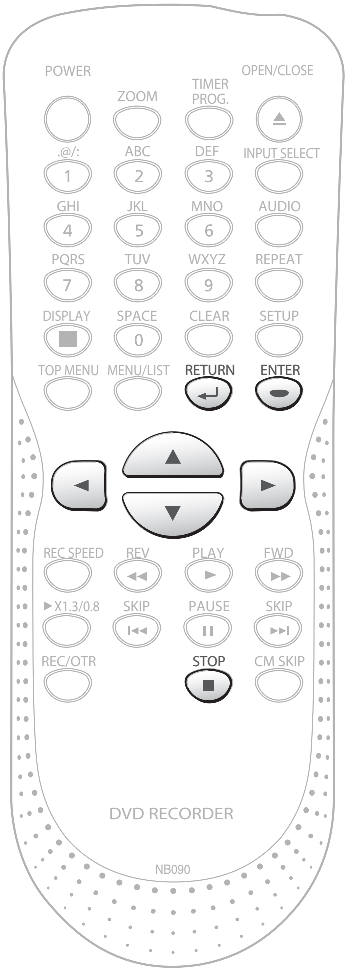
Note

- You cannot divide a title of the disc when the number of recording titles reaches the maximum of 99, and the number of recording chapters reaches the maximum of 999.

Combining Titles

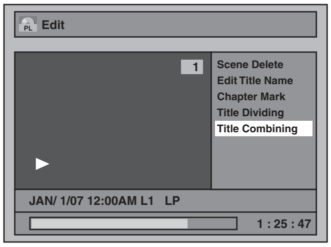
DVD -RW VR MODE Playlist

You can combine 2 titles into a single title.

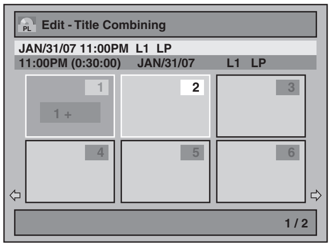

POWER
OPEN/CLOSE
ZOOM
TIMER PROG.
.@/:
ABC
DEF
INPUT SELECT
1
2
3
GHI
JKL
MNO
AUDIO
4
5
6
PQRS
TUV
WXYZ
REPEAT
7
8
9
DISPLAY
SPACE
CLEAR
SETUP
0
TOP MENU
MENU/LIST
RETURN
ENTER
REC SPEED
REV
PLAY
FWD
▶X1.3/0.8
SKIP
PAUSE
SKIP
REC/OTR
STOP
CM SKIP
DVD RECORDER
NB090

1 **Follow the steps 1 to 3 in "Dividing a Title" on page 65 to display "Edit" menu.**

2 **Use [▲ / ▼] to select "Title Combining", then press [ENTER].**

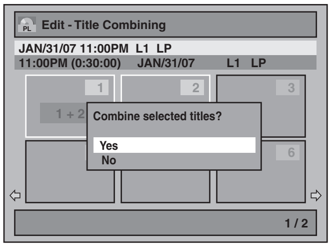

Edit
1
Scene Delete
Edit Title Name
Chapter Mark
Title Dividing
Title Combining
JAN/ 1/07 12:00AM L1 LP
1 : 25 : 47

Title combining setting window will appear.
Selected title grays out, and the frame of the next title becomes yellow.


Edit - Title Combining
JAN/31/07 11:00PM L1 LP
11:00PM (0:30:00) JAN/31/07 L1 LP
1
1 +
2
3
4
5
6
1 / 2

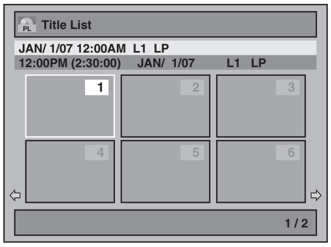
3 **Use [▲ / ▼ / ◀/ ▶] to select another title to combine, then press [ENTER].**

4 **Use [▲ / ▼] to select "Yes", then press [ENTER].**


Edit - Title Combining
JAN/31/07 11:00PM L1 LP
11:00PM (0:30:00) JAN/31/07 L1 LP
1
2
3
1 + 2
6
Yes
No
1 / 2

Combine selected titles?

The 2 titles will combine into a single title.


Title List
JAN/ 1/07 12:00AM L1 LP
12:00PM (2:30:00) JAN/ 1/07 L1 LP
1
2
3
4
5
6
1 / 2

5 **Press [RETURN ↵] or [STOP ■] to exit.**
Data will be written onto the disc momentarily.

This operation may take awhile to be completed.

Note

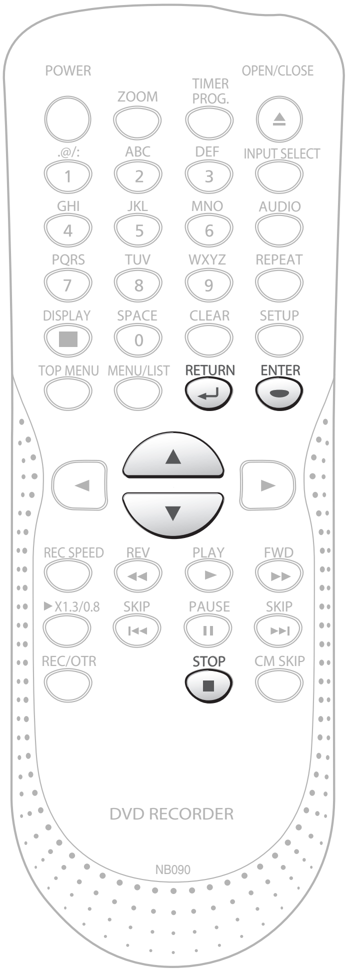
- You cannot select the same title twice and combine it into a single title.
- If either one of the 2 original titles is deleted, the combined new title is also deleted.

Setting or Releasing the Title Protection

DVD -RW VR MODE Original

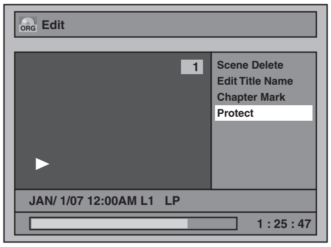
To prevent the accidental editing, or erasing of the titles, you can protect them in “Edit” menu.

You can cancel the title protection feature after it is applied.


POWER
ZOOM
TIMER PROG.
OPEN/CLOSE
.@/: 1
ABC 2
DEF 3
INPUT SELECT
GHI 4
JKL 5
MNO 6
AUDIO
PQRS 7
TUV 8
WXYZ 9
REPEAT
DISPLAY
SPACE 0
CLEAR
SETUP
TOP MENU
MENU/LIST
RETURN
ENTER
REC SPEED
REV
PLAY
FWD
▶X1.3/0.8
SKIP
PAUSE
SKIP
REC/OTR
STOP
CM SKIP
DVD RECORDER
NB090

1 **Follow the steps 1 to 3 in “Putting Names on Titles” on page 60 to display “Edit” menu.**

2 **Use [▲ / ▼] to select “Protect”, then press [ENTER].**



Edit

1

Scene Delete
Edit Title Name
Chapter Mark
Protect

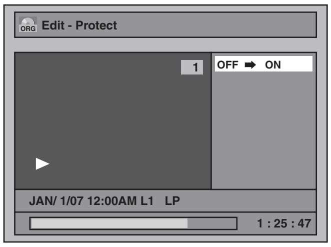
JAN/ 1/07 12:00AM L1 LP

1 : 25 : 47

- If the title is protected, 🔒 will appear in the original list.

3 **Confirm the indication “OFF ➡ ON”. Press [ENTER] again.**

- If the title is already protected, “ON ➡ OFF” will appear. If you press **[ENTER]**, the title will be released from protection.



Edit - Protect

1

OFF ➡ ON

JAN/ 1/07 12:00AM L1 LP

1 : 25 : 47

- 🔒 will appear on the title in the original list.

4 **Press [RETURN ↵] and then [RETURN ↵] or [STOP ■] to exit.**

Data will be written onto the disc momentarily.

This operation may take awhile to be completed.

To protect a whole disc (VR mode DVD-RW only):

Select “Disc Protect OFF ➡ ON” from the DVD Menu, then select “Yes”.

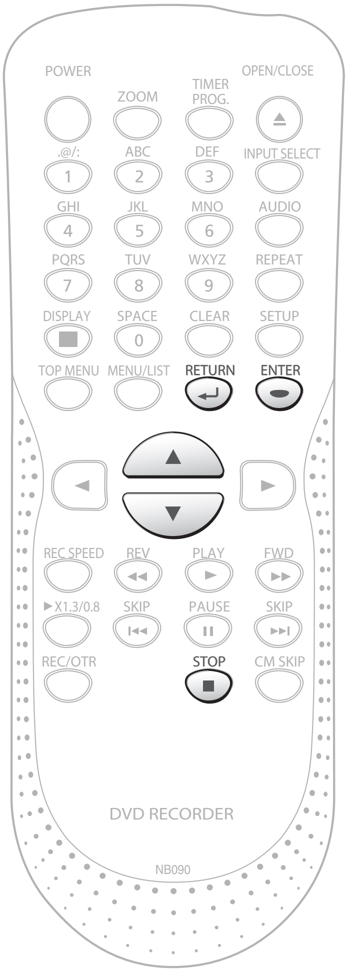
Refer to “SETTING A DISC TO PROTECT” on page 26.

Setting or Clearing All Chapter Marks at Once

DVD -RW VIDEO MODE

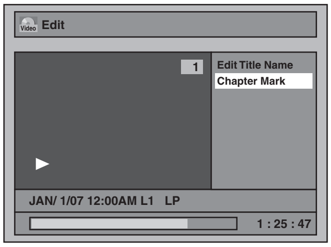
For titles in video mode DVD-RW, you can set or edit chapter at every time interval. You can clear the chapter mark too.

You can specify the interval of chapter marks for titles last more than 5 minutes.

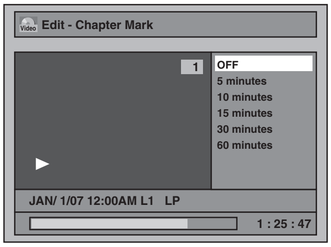

POWER
OPEN/CLOSE
ZOOM
TIMER PROG.
.@/:
1
ABC
2
DEF
3
INPUT SELECT
GHI
4
JKL
5
MNO
6
AUDIO
PQRS
7
TUV
8
WXYZ
9
REPEAT
DISPLAY
SPACE
0
CLEAR
SETUP
TOP MENU
MENU/LIST
RETURN
ENTER
REC SPEED
REV
PLAY
FWD
▶X1.3/0.8
SKIP
PAUSE
SKIP
REC/OTR
STOP
CM SKIP
DVD RECORDER
NB090

1 **Follow the steps 1 to 3 in "Putting Names on Titles" on page 60 to display "Edit" menu.**

2 **Use [▲ / ▼] to select "Chapter Mark", then press [ENTER].**


Edit
1
Edit Title Name
Chapter Mark
JAN/ 1/07 12:00AM L1 LP
1 : 25 : 47

3 **Use [▲ / ▼] to select the desired interval, then press [ENTER].**


Edit - Chapter Mark
1
OFF
5 minutes
10 minutes
15 minutes
30 minutes
60 minutes
JAN/ 1/07 12:00AM L1 LP
1 : 25 : 47

4 **Use [▲ / ▼] to select "Yes", then press [ENTER].**

Chapter marks are added.

If you select "OFF" at step 3, all the chapter marks are erased.

5 **Press [RETURN ↵] and then [RETURN ↵] or [STOP ■] to exit.**

Data will be written onto the disc momentarily.

This operation may take awhile to be completed.

Note

- You cannot select a chapter mark interval that exceeds the length of a title.
- The length of chapters may slightly deviate from the one specified at the step 3.
- A chapter mark may be delayed depending on the recording content.
- The maximum number of chapter for video mode DVD is 99 chapters per disc and title.

LIST OF SETTINGS

The following table is the contents which you can set and the default settings.
Refer to the following table for useful operation.

Setup		Items (highlight is the default)			Contents
General Setting	Playback	Parental Lock → page 72		**All** level 8 to 1	Set the parental level for DVD playback.
		Audio Out → page 73	Dynamic Range Control	**ON** OFF	Compressing the range of sound volume.
			PCM	**48kHz** 96kHz	Set whether the sound recorded in 96kHz will be down sampled in 48kHz.
			Dolby Digital	PCM **Stream**	Set the type of sound signal which outputs from the digital audio output jack.
		Disc Menu Language → page 73		**English** French Spanish Other	Set the language for disc menu language.
		Audio Language → page 73		**Original** English French Spanish Other	Set the language for audio.
		Subtitle Language → page 74		**OFF** English French Spanish Other	Set the language for subtitles.
		Angle Icon → page 74		**ON** OFF	Set whether to display the angle icon or not.
		Still Mode → page 74		**Auto** Field Frame	Set the type of still image in pausing playback.
	Display	OSD Language → page 76		**English** Français Español	Set the language for OSD (on-screen display).
		Screen Saver → page 76		OFF 5minutes **10minutes** 15minutes 30miniutes	Set the idling time before the screen saver starts.
		FL Dimmer → page 76		Auto **Bright** Dark	Set the brightness of the front panel display.

LIST OF SETTINGS

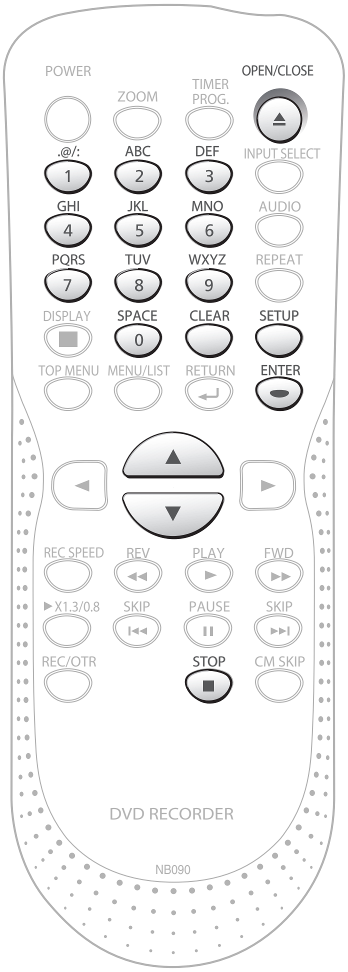
Setup		Items (highlight is the default)			Contents
General Setting	Video	Progressive → page 78		ON OFF	Set to the progressive scan mode (set to "ON") or to the interlace scan mode(set to "OFF").
		TV Aspect → page 78		4:3 Letter Box 4:3 Pan & Scan 16:9 Wide	Set a picture size according to aspect ratio of your TV.
		Select Video → page 16	L1(Rear)	Video In S-Video In	Set the video input type for the external input.
			L2(Front)	Video In S-Video In	
	Recording	Auto Chapter → page 25		OFF 5 minutes 10 minutes 15 minutes 30 minutes 60 minutes	Insert chapter marks at even time interval.
		Auto Finalize → page 27	Disc Full	ON OFF	Set the unit to finalize the disc automatically.
			End of Timer Rec	ON OFF	
		Aspect Ratio(Video mode) → page 25		Auto 4:3 16:9	Set a aspect ratio for video mode recording.
	Clock	Clock Setting → page 22			Set the clock.
	Reset All → page 79			Yes No	Set to the default setting.

Note

- Your change to each settings stays on even when the power is off.
- An item which is not currently available is grayed in the settings.
- **"Make Recording Compatible" in "Recording" menu does not work on this unit.**

SETUPS

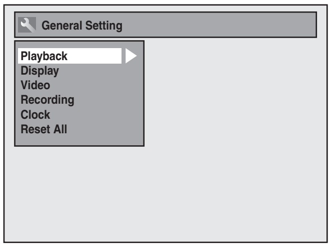
Playback


POWER
OPEN/CLOSE
ZOOM
TIMER PROG.
.@/:
ABC
DEF
INPUT SELECT
1
2
3
GHI
JKL
MNO
AUDIO
4
5
6
PQRS
TUV
WXYZ
REPEAT
7
8
9
DISPLAY
SPACE
CLEAR
SETUP
0
TOP MENU
MENU/LIST
RETURN
ENTER
REC SPEED
REV
PLAY
FWD
▶X1.3/0.8
SKIP
PAUSE
SKIP
REC/OTR
STOP
CM SKIP
DVD RECORDER
NB090

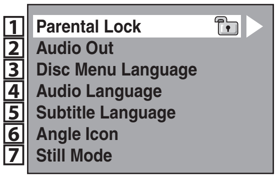
Press **[STOP ■]** if you are playing back a disc.

1 **Press [SETUP] and use [▲ / ▼] to select “General Setting“, then press [ENTER].**

2 **Use [▲ / ▼] to select “Playback”, then press [ENTER].**


General Setting
Playback
Display
Video
Recording
Clock
Reset All

3 **Use [▲ / ▼] to select a desired item, then press [ENTER].**


1 Parental Lock
2 Audio Out
3 Disc Menu Language
4 Audio Language
5 Subtitle Language
6 Angle Icon
7 Still Mode

Submenu will appear.

4 **Refer 1 to 7 on pages 72 to 74 and set the selected item.**

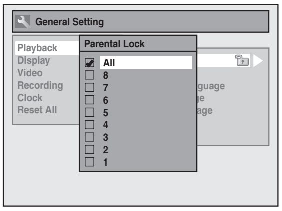
5 **When you finish with the setting, press [SETUP] to exit.**

Playback (cont'd)

1 Parental Lock (Default: All)

Some DVD-video feature a parental lock level. Playback will stop if the ratings exceed the levels you set, it will require you to enter a password before the disc will playback. This feature prevents your children from viewing inappropriate material.

Use [▲ / ▼] to select the desired level, then press [ENTER].


General Setting
Playback
Display
Video
Recording
Clock
Reset All
Parental Lock
☑ All
☐ 8
☐ 7
☐ 6
☐ 5
☐ 4
☐ 3
☐ 2
☐ 1
guage
ge
age

If a password has not been set yet, proceed to **A**.

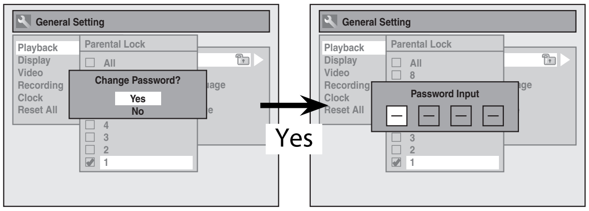
If a password has been set already, proceed to **B**.

Note

- Parental lock function may not be available to some discs.
- With some DVD, it may be difficult to find if they are compatible with parental lock. Be sure to check if the parental lock function operates in the way that you have set.
- Record the password in case you forget it.
- If there is a DVD in the unit when you set up the parental lock, press **[OPEN/CLOSE ▲]** to activate the parental lock level.

A A password has not been set yet.

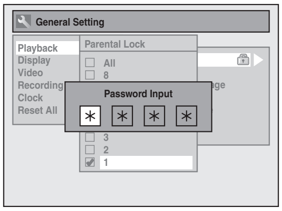
Use [▲ / ▼] to select "Yes", then press [ENTER]. Use [the Number buttons] to enter a new password except for 4737, then press [ENTER].


General Setting
Playback
Display
Video
Recording
Clock
Reset All
Parental Lock
☐ All
☐ 8
Change Password?
Yes
No
☐ 4
☐ 3
☐ 2
☑ 1
Yes
Password Input
– – – –

Your setting will be activated.

B A password has been set already.

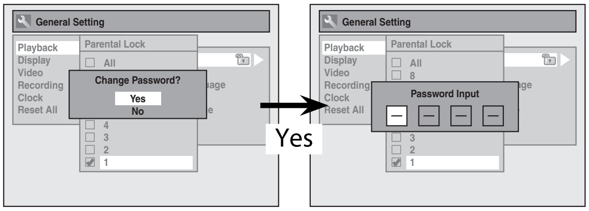
- **Use [the Number buttons] to enter the current password.**


General Setting
Playback
Display
Video
Recording
Clock
Reset All
Parental Lock
☐ All
☐ 8
Password Input
* * * *
☐ 3
☐ 2
☑ 1

Your setting will be activated.

- **If you want to change password, use [▲ / ▼] to select "Yes" then press [ENTER]. Use [the Number buttons] to enter a new password, then press [ENTER].**

<change the password>


General Setting
Playback
Display
Video
Recording
Clock
Reset All
Parental Lock
☐ All
☐ 8
Change Password?
Yes
No
☐ 4
☐ 3
☐ 2
☑ 1
Yes
Password Input
– – – –

Your setting will be activated.

Note

- Press **[CLEAR]** to erase numbers entered incorrectly.
- When you forget the password or you want to clear all settings in "Parental Lock" menu, enter 4,7,3,7 using **[the Number buttons]** in password input window. Password will be cleared and parental levels will be set to "All".

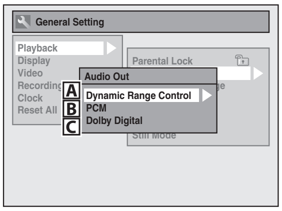
Playback (cont'd)

2 Audio Out

Choose the appropriate audio setting for your external device.

It will only affect a disc playback.

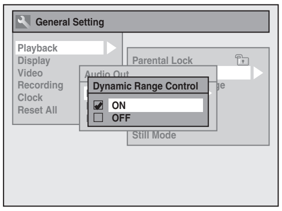
Use [▲ / ▼] to select a desired item, then press [ENTER].


General Setting
Playback
Display
Video
Recording
Clock
Reset All
Parental Lock
Audio Out
A Dynamic Range Control
B PCM
C Dolby Digital
Still Mode

A Dynamic Range Control (Default : ON)

Set to "ON" to compress the range between soft and loud sounds.

Use [▲ / ▼] to select a setting, then press [ENTER].

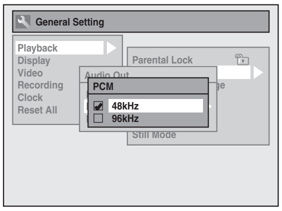

General Setting
Playback
Display
Video
Recording
Clock
Reset All
Parental Lock
Audio Out
Dynamic Range Control
☑ ON
☐ OFF
Still Mode

Your setting will be activated.

> ***Note***
> - Dynamic range control function is available only on the discs which are recorded in the Dolby Digital format.

B PCM (Default : 48kHz)

Use [▲ / ▼] to select a setting, then press [ENTER].


General Setting
Playback
Display
Video
Recording
Clock
Reset All
Parental Lock
Audio Out
PCM
☑ 48kHz
☐ 96kHz
Still Mode

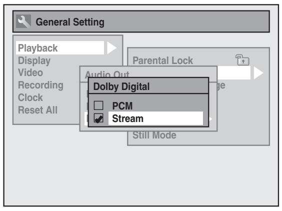
Your setting will be activated.

48kHz	: If your amplifier/decoder is NOT compatible with 96kHz PCM, select "48kHz". 96kHz sound will be output in 48kHz.
96kHz	: If your amplifier/decoder is compatible with 96kHz PCM, select "96kHz". 96kHz sound will be output.

> ***Note***
> When playing back disc with copyright protection
> - Even if you select "96kHz", the sound will be down sampled at 48kHz.

C Dolby Digital (Default : Stream)

Use [▲ / ▼] to select a setting, then press [ENTER].


General Setting
Playback
Display
Video
Recording
Clock
Reset All
Parental Lock
Audio Out
Dolby Digital
☐ PCM
☑ Stream
Still Mode

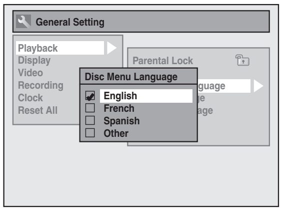
Your setting will be activated.

PCM	: Converts the Dolby Digital into PCM (2 channel). When your amplifier/decoder is NOT compatible with Dolby Digital, set to "PCM".
Stream	: Outputs Dolby Digital signals When your amplifier/decoder is compatible with Dolby Digital, set to "Stream".

3 Disc Menu Language (Default : English)

Set the language for disc menu.

Use [▲ / ▼] to select a language, then press [ENTER].

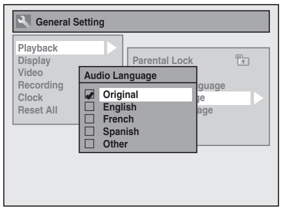

General Setting
Playback
Display
Video
Recording
Clock
Reset All
Parental Lock
Disc Menu Language
☑ English
☐ French
☐ Spanish
☐ Other

Your setting will be activated.

4 Audio Language (Default : Original)

Set the audio language.

Use [▲ / ▼] to select a language, then press [ENTER].


General Setting
Playback
Display
Video
Recording
Clock
Reset All
Parental Lock
Audio Language
☑ Original
☐ English
☐ French
☐ Spanish
☐ Other

Your setting will be activated.

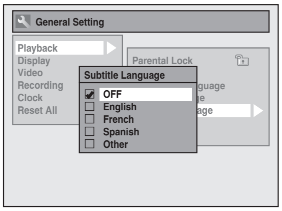
- When "Original" is selected, the audio language will be in the disc's default language.

Playback (cont'd)

5 Subtitle Language (Default : OFF)

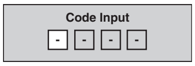
Set the subtitle language.

Use [▲ / ▼] to select a language, then press [ENTER].


General Setting
Playback
Display
Video
Recording
Clock
Reset All
Parental Lock
Subtitle Language
☑ OFF
☐ English
☐ French
☐ Spanish
☐ Other

Your setting will be activated.

If "Other" is selected for **3** to **5**, press 4-digit code using **[the Number buttons]**.



- **When you finish entering the code, press [ENTER]. Refer to the language code table on page 85.**

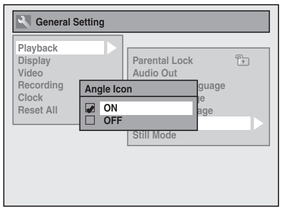
Note

- Only the languages supported by the disc can be selected.
- Audio language setting may not be available to some discs.
- You can change or switch off the subtitles on a DVD also from the disc menu if it is available.
- Press **[CLEAR]** to erase numbers entered incorrectly.

6 Angle Icon (Default : ON)

Set to "ON" to show the angle icon during the playback.

Use [▲ / ▼] to select a setting, then press [ENTER].

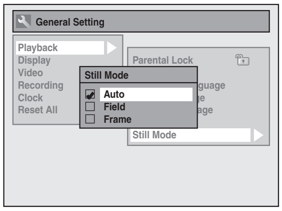

General Setting
Playback
Display
Video
Recording
Clock
Reset All
Parental Lock
Audio Out
Angle Icon
☑ ON
☐ OFF
Still Mode

Your setting will be activated.

7 Still Mode (Default : Auto)

Select "Auto" usually.

Use [▲ / ▼] to select a setting, then press [ENTER].


General Setting
Playback
Display
Video
Recording
Clock
Reset All
Parental Lock
Still Mode
☑ Auto
☐ Field
☐ Frame
Still Mode

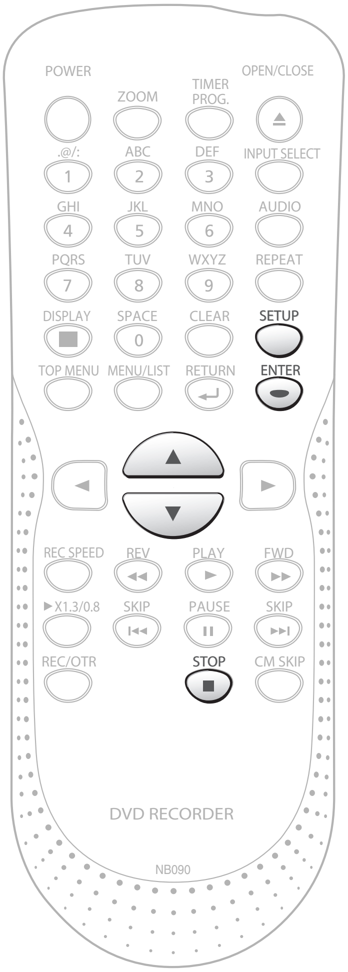
Your setting will be activated.

Auto : Optimum resolution setting ("Field" or "Frame") will be selected.
Field : Images in the still mode will be stabilized.
Frame : Images in the still mode will be highly defined.

Note

- Frame is one completed video image made up of 2 fields (There are 30 frames per second of NTSC video).

Display

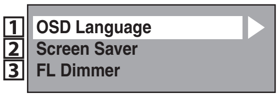

POWER
OPEN/CLOSE
ZOOM
TIMER PROG.
.@/:
ABC
DEF
INPUT SELECT
1
2
3
GHI
JKL
MNO
AUDIO
4
5
6
PQRS
TUV
WXYZ
REPEAT
7
8
9
DISPLAY
SPACE
CLEAR
SETUP
0
TOP MENU
MENU/LIST
RETURN
ENTER
REC SPEED
REV
PLAY
FWD
▶X1.3/0.8
SKIP
PAUSE
SKIP
REC/OTR
STOP
CM SKIP
DVD RECORDER
NB090

Press **[STOP ■]** if you are playing back a disc.

1 **Press [SETUP] and use [▲ / ▼] to select “General Setting”, then press [ENTER].**

2 **Use [▲ / ▼] to select “Display”, then press [ENTER].**

3 **Use [▲ / ▼] to select a desired item, then press [ENTER].**


1 OSD Language
2 Screen Saver
3 FL Dimmer

Selection menu will appear.

4 **Refer to 1 to 3 on page 76 and set the selected item.**

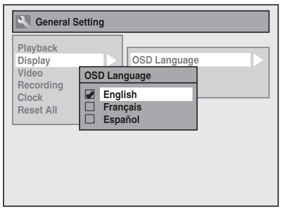
5 **When you finish with setting, press [SETUP] to exit.**

Display (cont'd)

1 OSD Language (Default : English)

Set the language for the on-screen display.

Use [▲ / ▼] to select a setting, then press [ENTER].


General Setting
Playback
Display
Video
Recording
Clock
Reset All
OSD Language

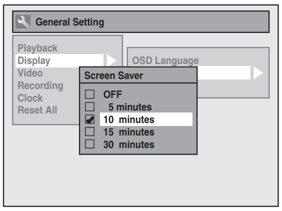
OSD Language
☑ English
☐ Français
☐ Español

Your setting will be activated.

2 Screen Saver (Default : 10 minutes)

Set the time to activate the screen saver function on the TV screen.

Use [▲ / ▼] to select a setting, then press [ENTER].


General Setting
Playback
Display
Video
Recording
Clock
Reset All
OSD Language

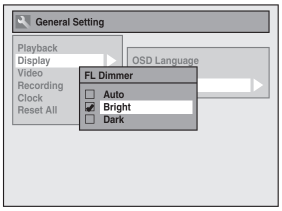
Screen Saver
☐ OFF
☐ 5 minutes
☑ 10 minutes
☐ 15 minutes
☐ 30 minutes

Your setting will be activated.

3 FL Dimmer (Default: Bright)

Set the front panel display brightness.

Use [▲ / ▼] to select a setting, then press [ENTER].

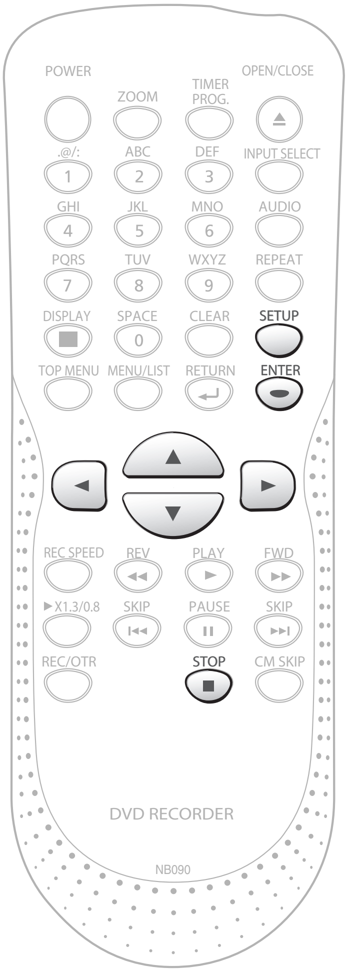

General Setting
Playback
Display
Video
Recording
Clock
Reset All
OSD Language

FL Dimmer
☐ Auto
☑ Bright
☐ Dark

You can choose one from "Auto", "Bright" or "Dark".

If "Auto" is selected, the display gets dark when the power is off.

Video

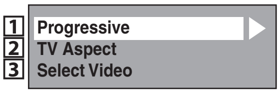

POWER
OPEN/CLOSE
ZOOM
TIMER PROG.
.@/:
ABC
DEF
INPUT SELECT
1
2
3
GHI
JKL
MNO
AUDIO
4
5
6
PQRS
TUV
WXYZ
REPEAT
7
8
9
DISPLAY
SPACE
CLEAR
SETUP
0
TOP MENU
MENU/LIST
RETURN
ENTER
REC SPEED
REV
PLAY
FWD
▶X1.3/0.8
SKIP
PAUSE
SKIP
REC/OTR
STOP
CM SKIP
DVD RECORDER
NB090

Press **[STOP ■]** if you are playing back a disc.

1 **Press [SETUP] and use [▲ / ▼] to select “General Setting”, then press [ENTER].**

2 **Use [▲ / ▼] to select “Video”, then press [ENTER].**

3 **Use [▲ / ▼] to select a desired item, then press [ENTER].**



1 Progressive
2 TV Aspect
3 Select Video

Submenu will appear.

4 **Refer 1 to 2 on page 78 and set the selected item.**

- For 3, refer to “Connection to an External Device” on page 39.

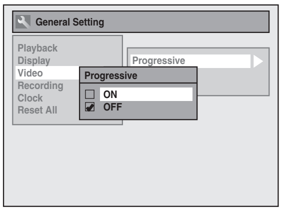
5 **When you finish with the setting, press [SETUP] to exit.**

Video (cont'd)

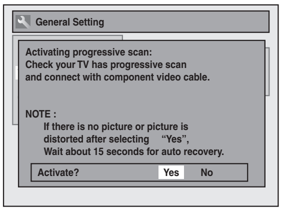
1 Progressive (Default : OFF)

This unit is compatible with the progressive scan system. The feature provides you with the higher definition images than the traditional output system does. To utilize this feature, you must set progressive scan mode to "ON".

1) Use [▲ / ▼] to select "ON", then press [ENTER].


General Setting
Playback
Display
Video
Recording
Clock
Reset All
Progressive
Progressive
☐ ON
☑ OFF

2) Use [◄ / ►] to select "Yes", then press [ENTER].


General Setting

Activating progressive scan:
Check your TV has progressive scan
and connect with component video cable.

NOTE :
If there is no picture or picture is
distorted after selecting "Yes",
Wait about 15 seconds for auto recovery.

Activate? Yes No

3) Use [▲ / ▼] to select "Yes" within 15 seconds, then press [ENTER].
Your setting will be activated.

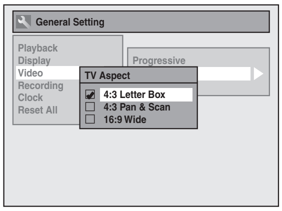
Note

- If your TV is compatible with progressive scan (525p / 480p), you are recommended to use the component video cable (commercially available) to connect this unit to the TV. (Refer to "Method 3" on page 17.) If not, use the RCA video cable and set the progressive scan to "OFF" or press and hold **[SETUP]** for more than 3 seconds during DVD playback.
- When selecting "No" or not pressing any buttons on the unit or remote control within 15 seconds at step 3, progressive scan remains to be "OFF" (interlace scan).

2 TV Aspect (Default: 4:3 Letter Box)

You can select the TV aspect ratio to match the formats of what you are playing back with the unit and your TV screen (4:3 standard or 16:9 widescreen TV).

Use [▲ / ▼] to select a desired option, then press [ENTER].


General Setting
Playback
Display
Video
Recording
Clock
Reset All
Progressive
TV Aspect
☑ 4:3 Letter Box
☐ 4:3 Pan & Scan
☐ 16:9 Wide

If you have a standard TV:

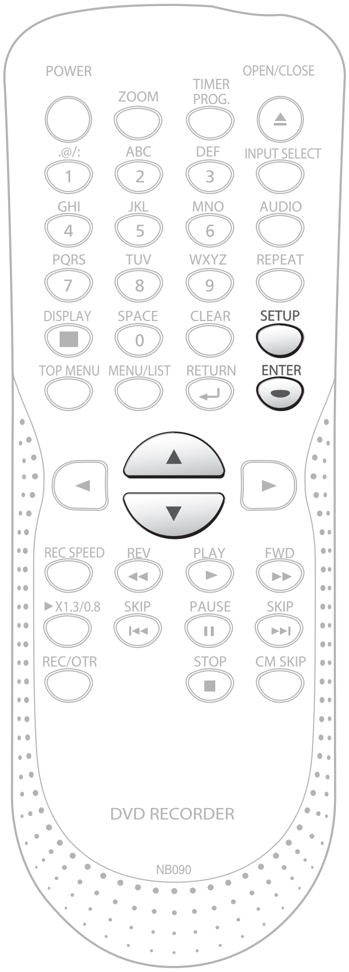
Select "4:3 Letter Box", so that black bars appear on the top and bottom of the TV screen when playing back a wide-screen picture. Select "4:3 Pan & Scan" for a full height picture with both sides trimmed when playing back wide-screen picture.

If you have a widescreen TV:

Select "16:9 Wide".

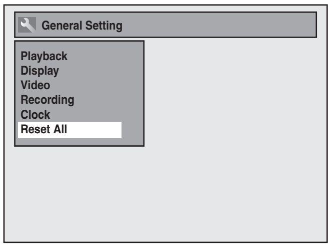
Reset All

Reset the setting to default.

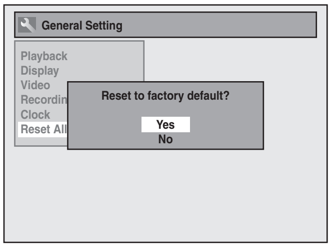

POWER
OPEN/CLOSE
ZOOM
TIMER PROG.
.@/: 1
ABC 2
DEF 3
INPUT SELECT
GHI 4
JKL 5
MNO 6
AUDIO
PQRS 7
TUV 8
WXYZ 9
REPEAT
DISPLAY
SPACE 0
CLEAR
SETUP
TOP MENU
MENU/LIST
RETURN
ENTER
REC SPEED
REV
PLAY
FWD
▶X1.3/0.8
SKIP
PAUSE
SKIP
REC/OTR
STOP
CM SKIP
DVD RECORDER
NB090

1 **Press [SETUP] in stop mode and use [▲ / ▼] to select "General Setting", then press [ENTER].**

2 **Use [▲ / ▼] to select "Reset All", then press [ENTER].**


General Setting
Playback
Display
Video
Recording
Clock
Reset All

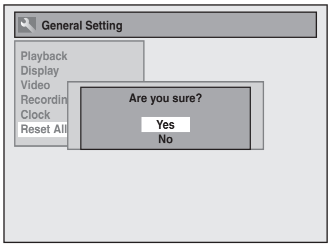
3 **Select "Yes" using [▲ / ▼] , then press [ENTER].**


General Setting
Playback
Display
Video
Recordin
Clock
Reset All

Reset to factory default?

Yes
No

4 **Select "Yes" again using [▲ / ▼] , then press [ENTER].**


General Setting
Playback
Display
Video
Recordin
Clock
Reset All

Are you sure?

Yes
No

Your setting in recording will be initialized.

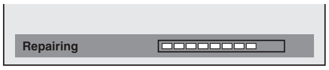
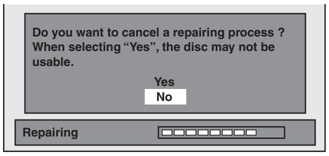
> ***Note***
> - The settings listed below will remain unchanged even after resetting to the factory default.
>   - Clock setting
>   - Channel setting
>   - OSD language setting
>   - Parental lock setting
>   - Timer programs

TROUBLESHOOTING

Before requesting service for this unit, check the table below for a possible cause of the problem you are experiencing. Some simple checks or a minor adjustment on your part may eliminate the problem and restore proper operation.

Symptom	Remedy
Power	
The power does not turn on.	• Check that the AC power cord is connected securely. • Check the breaker (in case of power failure).
Picture	
There is no picture.	• Re-connect the connecting cords securely. • Check if the connecting cords are damaged. • If the main menu appears on the TV screen, press **[RETURN ↵]** to exit. • Check the connection to your TV (page 17). • Check if the progressive scan mode is set correctly according to your TV (page 78). • Switch the input selector on your TV (such as to “L1”) so that the signal from the unit appears on the TV screen.
Picture noise appears.	• Clean the disc with a cleaning cloth.
TV program pictures are distorted.	• Check if all the connections are made correctly.
Playback picture is distorted.	• Keep the device which may cause electrical disturbances, such as a cellular phone away.
Cannot record a TV program.	• This unit does not have a tuner to receive TV broadcasting. • You must connect this unit to an external tuner to record TV programs (page 15).
Sound	
There is no sound.	• Clean the disc with a cleaning cloth. • Re-connect all connections securely. • Check if the connecting cord is damaged. • Check the connections to the amplifier input. • Check if the input device setting on the amplifier is correct. • When the unit is in pause mode or in slow-motion playback mode, sound is not output. This is not a malfunction. • When the unit is in fast forward or fast reverse mode, sound is not output. This is not a malfunction. • If you are using COAXIAL DIGITAL AUDIO OUTPUT jack, check the setting in “Audio Out” (page 73).
No DTS sound is output.	• This unit is not compatible with DTS sound.
Sound is noisy.	• Clean the disc with a cleaning cloth.
Remote control	
The remote control does not function.	• Batteries are weak. • There are obstacles between the remote control and the unit. • The remote control is far from the unit. • There are no batteries in the remote control. • Check if the unit is turned on. • Check if you are pointing the remote control at the recorder and NOT the TV. If you have a plasma TV, it may interfere with the IR signal. Try the remote with the plasma off. If the remote works, you may need to move the unit away from the plasma TV.

Symptom	Remedy
Playback	
The disc does not play back.	• No disc is inserted. • A blank disc is inserted. • The disc is upside down. Insert the disc with the labeled side facing up. • The disc is not correctly inserted. • The unit cannot play back certain discs (such as a CD-ROM) (page 9). • The region code on the DVD-video does not match the unit (page 9). • Moisture has condensed inside the unit. Remove the disc and leave the unit turned on for about 2 hours until the moisture evaporates (page 4). • If the disc was recorded on another recorder, the unit cannot play back the disc if it was not finalized.
The disc does not start playback from the beginning.	• Resume playback was activated (page 46). Press **[STOP ■]** twice. • You have inserted a disc whose title menu or DVD menu automatically appears on the TV screen when it is first inserted.
The unit starts playing back the disc automatically.	• The DVD-video features an auto playback function.
Some functions such as stop, search, or slow-motion playback cannot be performed.	• Depending on the disc, you may not be able to do some of the operations. Refer to the instruction manual supplied with the disc.
The language for the sound track cannot be changed.	• The title does not have the multilingual audio tracks. • The DVD-video prohibits the changing of the language for the sound track.
The subtitle language cannot be changed or turned off.	• Multilingual subtitle are not recorded on the DVD-video.
The angles cannot be changed.	• Multi-angles are not recorded on the DVD-video being played back. • The angle-change operation is whenever possible as long as the disc contains a multi-angle portion. Actual change will be performed when the portion has come up. • The DVD-video prohibits changing angles. • Try changing the angle using the DVD-video's menu.
Recording / Timer recording / Editing	
Nothing was recorded even though you set the timer setting correctly.	• There was a power failure during recording. • The unit's internal clock stopped due to a power failure that lasted for more than 30 seconds. Reset the clock (page 22). • The program contains copy protection signals that restricts copying. • The timer setting overlapped with another setting that has priority.
Recording does not stop immediately after you press **[STOP ■]**.	• It will take a few seconds for the unit to input disc data before recording stops.
Timer recording is not complete or did not start from the beginning.	• The timer setting overlapped with another setting that has priority (page 36). • Disc space was not enough.

Symptom	Remedy
Others	
The unit does not operate properly.	• When static electricity, etc., causes the unit to operate abnormally, unplug the unit and then plug it in again.
The disc tray does not open when you press **[OPEN/CLOSE ⏏]**.	• It may take a few seconds for the disc tray to open after you have recorded or edited a disc. This is because the unit is adding disc data to the disc.
“Repairing” appears on the TV screen.  Repairing	• If there is a power failure or unplugging during recording, finalizing, formatting or editing (even after “Repairing” disappears), a repairing process will begin automatically just after turning the unit on again. It may take several minutes up to about several hours.
In a case you intend to cancel the repairing process.  Do you want to cancel a repairing process ? When selecting “Yes”, the disc may not be usable. Yes No Repairing	• If you intend to cancel the repairing process, press **[OPEN/CLOSE ⏏]** on the front panel, then select “Yes” and press **[ENTER]**. After that, press **[OPEN/CLOSE ⏏]** to take out the disc. **The disc canceled during the repairing process MAY NOT work.**

TROUBLESHOOTING

Error message	Cause	Solution
Disc Error — Please eject the disc. — Playback feature may not be available on this disc.	• Unplayable disc is inserted in the unit. • The disc is upside down.	• Insert the standardized disc which have the marks on pages 8-9. • Insert the disc with the labeled side facing up.
Region Error — Please eject the disc. — Playback is not authorized in your region.	• Playback is not authorized in the region of the DVD-video which you inserted in the unit.	• Insert the DVD-video with region codes 1 or ALL.
Parental Lock On The current selected parental level prohibits playback.	• The current selected parental level prohibits playback.	• Check “Parental Lock” setting in “Playback” menu (page 72).
Recording Error This program is not allowed to be recorded.	• You are trying to record the copy prohibited program.	• You cannot record copy prohibited programs.
Recording Error This program is not recordable in Video mode.	• You are trying to record the copy-once program onto the DVD-RW disc in video mode.	• Set “Format Mode” to “VR mode” (page 23).
Recording Error Cannot record on this disc.	• You are trying to record onto the disc which is unrecordable, or the disc status is unable to record. • The disc is dirty. • The disc is damaged.	• Insert the recordable disc, and ensure the disc status satisfies the recording requirements (page 8). • Clean the disc with a cleaning cloth. • Replace the disc.
Recording Error This program is not allowed to be recorded on this disc.	• You are trying to record the copy-once program onto the DVD-RW disc which is not compatible with CPRM.	• Insert the DVD-RW disc in VR mode (ver.1.1 or 1.2 compatible with CPRM).
Recording Error This disc is protected and not recordable.	• You are trying to record on to the protected disc which is set in “DVD Menu” menu.	• Release the disc protect setting in “DVD Menu” menu (page 26).
Recording Error Disc is full. (No area for new recording)	• You are trying to record onto the disc which has no space for recording.	• Insert the recordable disc with enough recording space.
Recording Error You cannot record more than 99 titles on one disc. (The maximum is 99)	• You are trying to record onto the DVD-RW/-R on which the number of recording titles comes up to the maximum (99).	• Delete unnecessary titles (page 57).
Recording Error You cannot record more than 999 chapters on one disc. (The maximum is 999)	• You are trying to record onto the VR mode DVD-RW on which the number of recording chapters comes up to the maximum (999).	• Delete unnecessary chapter marks (page 62).
Recording Error You cannot record on this disc as Control Information is full.	• This disc has no space to write the Control Information when recording or deleting contents. When editing has been repeatedly performed, the control Information area may come up to be full even the recording area has enough space.	• Delete unnecessary titles (page 57).
Recording Error You cannot record on this disc as Power Calibration Area is full.	• When recordings are performed repeatedly onto an unstable disc, this area may come up to be full. • Every time you insert a disc for recording, the disc’s working area will be taken up. And if you repeat this frequently, it will be used up sooner and you may not be able to record full 99 titles.	• Insert a new disc.
Recording Error This disc is already finalized.	• You are trying to record onto the disc already finalized.	• Undo the finalizing for this disc (pages 28-29).

* If you are still having trouble with the unit after checking “TROUBLESHOOTING”, write down the error code and the error description for calling our help line to locate an Authorized Service Center.

Frequently Asked Questions

– Can I record to CD-RW/-R?	No, this unit records only DVD.
– Can I play back DVD-video that is bought in another country?	Possible when the region code of the disc is 1 and All.
– Can I connect the unit to my PC?	No, you cannot control the unit by PC.
– Can I program a timer recording with an external tuner?	Yes, you can. Select “L1” or “L2” as your recording channel, and leave the external tuner on (pages 15, 33-36).
– Can I record one channel while watching another channel using an external tuner?	It depends on your connection configurations. For more details, please kindly contact at your local store.
– Can I change the channels on the external tuner using the remote control of this unit?	No. Changing the channels on the external tuner using this unit’s remote control is not possible. You need to use the remote control supplied with the external tuner to change the channels on the external tuner.

LANGUAGE CODE

Language	Code
Abkhazian	4748
Afar	4747
Afrikaans	4752
Albanian	6563
Amharic	4759
Arabic	4764
Armenian	5471
Assamese	4765
Aymara	4771
Azerbaijani	4772
Bashkir	4847
Basque	5167
Bengali;Bangla	4860
Bhutani	5072
Bihari	4854
Bislama	4855
Breton	4864
Bulgarian	4853
Burmese	5971
Byelorussian	4851
Cambodian	5759
Catalan	4947
Chinese	7254
Corsican	4961
Croatian	5464
Czech	4965
Danish	5047
Dutch	6058
English	5160
Esperanto	5161
Estonian	5166
Faroese	5261
Fiji	5256
Finnish	5255
French	5264
Frisian	5271
Galician	5358
Georgian	5747
German	5051
Greek	5158
Greenlandic	5758
Guarani	5360
Gujarati	5367
Hausa	5447
Hebrew	5569
Hindi	5455

Language	Code
Hungarian	5467
Icelandic	5565
Indonesian	5560
Interlingua	5547
Interlingue	5551
Inupiak	5557
Irish	5347
Italian	5566
Japanese	5647
Javanese	5669
Kannada	5760
Kashmiri	5765
Kazakh	5757
Kinyarwanda	6469
Kirghiz	5771
Kirundi	6460
Korean	5761
Kurdish	5767
Laothian	5861
Latin	5847
Latvian; Lettish	5868
Lingala	5860
Lithuanian	5866
Macedonian	5957
Malagasy	5953
Malay	5965
Malayalam	5958
Maltese	5966
Maori	5955
Marathi	5964
Moldavian	5961
Mongolian	5960
Nauru	6047
Nepali	6051
Norwegian	6061
Occitan	6149
Oriya	6164
Oromo (Afan)	6159
Panjabi	6247
Pashto; Pushto	6265
Persian	5247
Polish	6258
Portuguese	6266
Quechua	6367
Rhaeto-Romance	6459
Romanian	6461

Language	Code
Russian	6467
Samoan	6559
Sangho	6553
Sanskrit	6547
Scots Gaelic	5350
Serbian	6564
Serbo-Croatian	6554
Sesotho	6566
Setswana	6660
Shona	6560
Sindhi	6550
Singhalese	6555
Siswat	6565
Slovak	6557
Slovenian	6558
Somali	6561
Spanish	5165
Sundanese	6567
Swahili	6569
Swedish	6568
Tagalog	6658
Tajik	6653
Tamil	6647
Tatar	6666
Telugu	6651
Thai	6654
Tibetan	4861
Tigrinya	6655
Tonga	6661
Tsonga	6665
Turkish	6664
Turkmen	6657
Twi	6669
Ukrainian	6757
Urdu	6764
Uzbek	6772
Vietnamese	6855
Volapuk	6861
Welsh	4971
Wolof	6961
Xhosa	7054
Yiddish	5655
Yoruba	7161
Zulu	7267

GLOSSARY

Analog Audio

An electrical signal that directly represents sound. Compare this to digital audio which can be an electrical signal, but is an indirect representation of sound. See also "Digital Audio".

Aspect Ratio

The width of a TV screen relative to its height. Conventional TVs are 4:3 (in other words, the TV screen is almost square); widescreen models are 16:9 (the TV screen is almost twice as wide as it is high).

Chapter

Just as a book is split up into several chapters, a title on a DVD is usually divided into chapters. See also "Title".

Component Video Output

Each signal of luminance (Y) and component (PB/CB, PR/CR) is independent to output so that you can experience picture color as it is.
Also, due to compatibility with progressive video (525p/480p), you can experience higher-density picture than that in interlace (525i/480i).

Digital Audio

An indirect representation of sound by numbers. During recording, the sound is measured at discrete intervals (44,100 times a second for CD audio) by an analog-to-digital converter, generating a stream of numbers. On playback, a digital-to-analog converter generates an analog signal based on these numbers. See also "Sampling Frequency" and "Analog Audio".

Dolby Digital

The system to compress digital sound developed by Dolby Laboratories. It offers you sound of stereo(2ch) or multi channel audio.

Finalize

To make DVD, which have been recorded on, possible to play back in DVD players.

JPEG (joint photographic experts group)

JPEG is a method of compressing still image files. You can copy JPEG files on CD-RW/-R from a computer and play back the files on this unit.

MP3 (MPEG audio layer 3)

MP3 is a method of compressing files. You can copy MP3 files on CD-RW/-R from the computer and play back the files on this unit.

PCM (pulse code modulation)

The most common system of encoding digital audio, found on CD and DAT. Excellent quality, but requires a lot of data compared to formats such as Dolby Digital and MPEG audio. For compatibility with digital audio recorders (CD, MD and DAT) and AV amplifiers with digital inputs, this unit can convert Dolby Digital and MPEG audio to PCM. See also "Digital Audio".

Progressive Scan (525p/480p)

A type of display that does not split each frame into fields, and instead scans directly through all the scanlines of each frame in order. Progressive scan provides less flickering and higher image resolution than traditional (525i/480i) TV signals. Refer to page 78 for instructions on selective progressive scan mode.

Region Code

Regions associate discs and players with particular areas of the world. This unit will only play back discs that have compatible region codes. You can find the region code of your unit by looking on the rear panel. Some discs are compatible with more than one region (or all regions).

Sampling Frequency

The rate which sound is measured by a specified interval to turn into digital audio data. The numbers of sampling in one second defines as sampling frequency. The higher the rate, the better the sound quality.

S-Video Output

It delivers independently each signal of color(C) and luminance(Y) to TV as video signals, so that higher-quality picture will be gained.

Title (DVD only)

A collection of chapters on DVD. See also "Chapter".

Track

Audio CD use tracks to divide up the content of a disc. The DVD equivalent is called a chapter. See also "Chapter".

SPECIFICATIONS

- This model complies with the below specifications.
- Designs and specifications are subject to change without notice.
- This model may not be compatible with features and/or specifications that may be added in the future.

General	
System	DVD-RW/-R, DVD-video, CD-DA, CD-RW/-R
Power requirements	120V AC +/-10%, 60Hz +/-5%
Power consumption	18W (standby: 2.8W)
Dimensions (width x height x depth)	16.6 x 2.4 x 9.8 inches (420 x 59 x 247mm)
Weight	4.7 lbs. (2.1kg)
Operating temperature	41°F (5°C) to 104°F (40°C)
Operating humidity	Less than 80% (no condensation)

Recording	
Recording format	VR (video recording) format, video format
Recording discs	DVD-Rewritable, DVD-Recordable
Video recording format	
Sampling frequency	13.5 MHz
Compression format	MPEG
Audio recording format	
Sampling frequency	48 kHz
Compression format	Dolby Digital

Terminals				
Front	**Audio input** RCA jack x 2	2V rms (input impedance: more than 22kΩ)		
	Video input RCA jack x 1	1Vp-p (75Ω)		
	S-video input Mini DIN 4-pin x 1	Y: 1Vp-p (75Ω)	C: 286mVp-p (75Ω)	
Rear	**Audio input** RCA jack x 2	2V rms (input impedance: more than 22kΩ)		
	Audio output RCA jack x 2	2V rms (output impedance: more than 1kΩ)		
	Video input RCA jack x 1	1Vp-p (75Ω)		
	Video output RCA jack x 1	1Vp-p (75Ω)		
	S-video input Mini DIN 4-pin x 1	Y: 1Vp-p (75Ω)	C: 286mVp-p (75Ω)	
	S-video output Mini DIN 4-pin x 1	Y: 1Vp-p (75Ω)	C: 286mVp-p (75Ω)	
	Component video output RCA jack x 3	Y: 1Vp-p (75Ω)	PB/CB: 700mVp-p (75Ω)	PR/CR: 700mVp-p (75Ω)
	Coaxial digital audio output RCA jack x 1	500mVp-p (75Ω)		

ESPAÑOL

	Discos grabables y reproducibles		
Tipo de disco	**DVD-RW**		**DVD-R**
Logotipo	DVD RW		DVD R R 4.7
Formato	Puede formatearse en modo VR o modo de video		Formateado automáticamente en modo de video
Tiempo máximo de grabación	Modo de video	Modo VR	
	480 minutos (12 centímetros) 144 minutos (8 centímetros)	480 minutos (12 centímetros) 144 minutos (8 centímetros)	480 minutos (12 centímetros) 144 minutos (8 centímetros)
Versiones grabables/ reproducibles	Versione 1.1,1.2 Versione 1.1/2× CPRM compatible Versione 1.2/4× CPRM compatible		Versione 2.0 Versione 2.0/4× Versione 2.0/8× Versione 2.0/16×
Compatibilidad	Se puede reproducir en la mayoría de los reproductores de DVD. Es necesario finalizar. (se creará el menú de DVD)	Se puede reproducir sólo en unidades compatibles con el modo VR. Se recomienda finalizar.	Se puede reproducir en la mayoría de los reproductores de DVD. Es necesario finalizar. (se creará el menú de DVD)

	Discos reproducibles			
Tipo de disco	**DVD-VIDEO**	**CD-DA**	**CD-RW**	**CD-R**
Logotipo	DVD VIDEO	COMPACT disc DIGITAL AUDIO	COMPACT disc ReWritable COMPACT disc DIGITAL AUDIO ReWritable	COMPACT disc Recordable COMPACT disc DIGITAL AUDIO Recordable

	Archivos reproducibles	
Título de disco	**MP3**	**JPEG**
Medio	CD-RW/-R	CD-RW/-R

DVD es una marca registrada de
DVD Format/Logo Licensing Corporation.

Los reproductores de DVD con RW COMPATIBLE pueden reproducir DVD-RW grabados en modo VR.

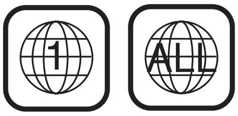
- Los siguientes discos se recomiendan para obtener una buena calidad de grabación y han sido comprobados como compatibles con este aparato. Sin embargo, según sea la condición del medio el equipo podría no leer el disco correctamente.

Verbatim	DVD-R 8x,	DVD-RW 2x
JVC	DVD-RW 4x	
Maxell	DVD-R 8x/16x	

El comportamiento de cualquier otro disco no está garantizado.

Códigos de Región

El número presente en el interior el globo se refiere a una región del mundo.Este aparato puede reproducir discos DVD que estén rotulados para ALL las regiones o para la región 1.



Discos no Reproducibles

En este aparato no se podrán reproducir los siguientes discos.

- CD-ROM
- Disco compacto interactivo (CD-I)
- Disco simple de video (VSD)
- DVD-ROM
- Audio en DVD
- Disco sin finalizar
- El DVD contiene archivos MP3 o JPEG
- DVD-R grabado en formato VR o en formato de grabación no compatible

En el siguiente disco, es posible que no se escuche el sonido.

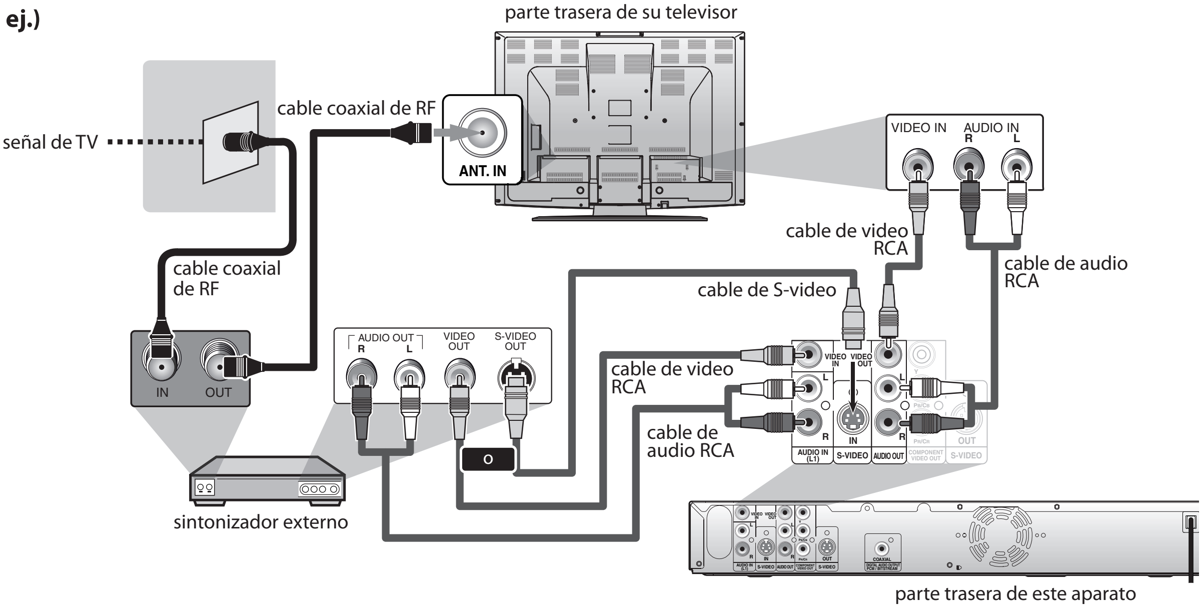
- Super audio CD - Sólo se podrá escuchar el sonido de la capa del CD. No se podrá escuchar el sonido de la capa de alta densidad de un super audio CD.

Conexión a un Sintonizador Externo

1) Desconecte el cable de alimentación de su televisor del tomacorriente de CA.

2) Efectúe la conexión como se ilustra abajo.

ej.)


parte trasera de su televisor
señal de TV
cable coaxial de RF
ANT. IN
VIDEO IN
AUDIO IN
R
L
cable de video RCA
cable de audio RCA
cable coaxial de RF
cable de S-video
IN
OUT
AUDIO OUT
R
L
VIDEO OUT
S-VIDEO OUT
cable de video RCA
cable de audio RCA
o
sintonizador externo
VIDEO IN
VIDEO OUT
AUDIO IN (L1)
S-VIDEO
AUDIO OUT
COMPONENT VIDEO OUT
S-VIDEO
parte trasera de este aparato

3) Enchufe los cables de alimentación de los aparatos al tomacorriente de CA.

Selección de un Canal de Entrada Externo en el Televisor

Luego de completar las conexiones, cambie el selector de entrada del televisor a un canal de entrada externo adecuado. Presione un botón que seleccione un canal externo de entrada en el control remoto original del televisor hasta que aparezca la imagen inicial del grabador de DVD. Para obtener detalles consulte el manual del propietario de su televisor.

Configuración de la Entrada de Video

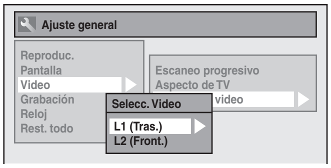
Antes de efectuar una grabación se debe informar al aparato qué conector hembra de entrada de video se está utilizando.

1 **Presione [SETUP] y utilice [▲ / ▼] para seleccionar “Ajuste general”, y luego presione [ENTER].**

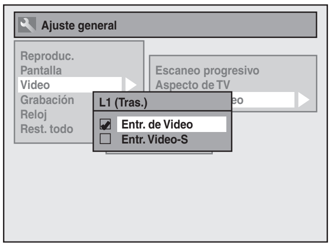
2 **Utilice [▲ / ▼] para seleccionar “Video”, y luego presione [ENTER].**

3 **Utilice [▲ / ▼] para seleccionar “Selecc. Video”, y luego presione [ENTER].**

4 **Utilice [▲ / ▼] para seleccionar la posición de la entrada externa deseada, y luego presione [ENTER].**


Ajuste general
Reproduc.
Pantalla
Video
Grabación
Reloj
Rest. todo
Escaneo progresivo
Aspecto de TV
video
Selecc. Video
L1 (Tras.)
L2 (Front.)

5 **Utilice [▲ / ▼] para seleccionar el tipo de conector hembra de entrada a conectar, y luego presione [ENTER].**


Ajuste general
Reproduc.
Pantalla
Video
Grabación
Reloj
Rest. todo
Escaneo progresivo
Aspecto de TV
eo
L1 (Tras.)
☑ Entr. de Video
☐ Entr. Video-S

6 **Para salir presione [SETUP].**

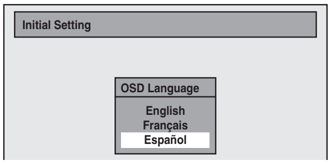
Configuración Inicial

Cuando usted encienda este aparato por primera vez necesita seguir estos pasos.

1 **Presione [POWER].**

Encienda el televisor. Seleccione la entrada a la cual está conectado el aparato.

2 **Utilice [▲ / ▼] para seleccionar su idioma deseado, y luego presione [ENTER] para establecerlo.**



Initial Setting

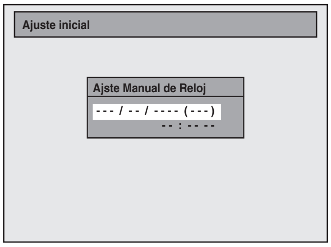
OSD Language

English

Français

Español

3 **Presione [ENTER] para activar “Ajste Manual de Reloj”.**



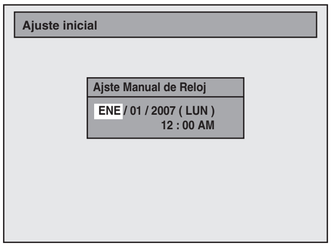
Ajuste inicial

Ajste Manual de Reloj

--- / -- / ---- (---)

-- : -- --

4 **Utilice [◀ / ▶] para seleccionar un elemento a configurar, y utilice [▲ / ▼] para seleccionar el contenido de su preferencia, y luego presione [ENTER].**



Ajuste inicial

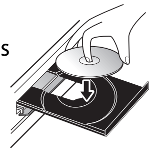
Ajste Manual de Reloj

ENE / 01 / 2007 (LUN)

12 : 00 AM

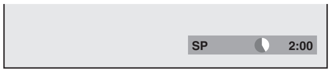
Grabación Básica

1 **Presione [OPEN/CLOSE ⏏] para abrir la bandeja de discos e insertar su disco con el rótulo aupntando hacia arriba.**



* Este aparato puede grabar a DVD-RW y DVD-R. El disco DVD-R pueden ser grabados sólo una vez. El disco DVD-RW pueden ser grabados y borrados muchas veces.

2 **Para seleccionar la velocidad de grabación presione [REC SPEED].**



SP 2:00

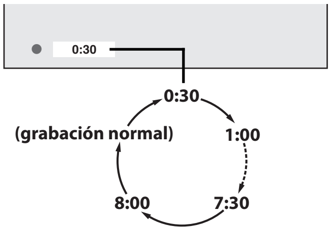
Modo de grabación	Tiempo de grabación		Calidad del video y el sonido
	Disco de 8 cm	Disco de 12 cm	
XP / 1H	18 min	60 min	Buena
SP / 2H	36 min	120 min	↕
LP / 4H	72 min	240 min	
EP / 6H	108 min	360 min	
SLP / 8H	144 min	480 min	Deficiente

3 **Presione [INPUT SELECT] para seleccionar la posición adecuada de la entrada externa (L1/L2) a la cual está conectado su sintonizador externo. Luego seleccione en el sintonizador externo el canal que desea grabar.**

4 **Presione [REC/OTR] para iniciar la grabación.**

Para configurar la grabación a un toque con temporizador (OTR)...

Esta es una manera sencilla de configurar el tiempo de grabación en bloques de 30 minutos.
Presione **[REC/OTR]** repetidamente hasta que aparezca en la pantalla del televisor la longitud deseada de grabación (30 minutos a 8 horas).
Comenzará la grabación a un toque con temporizador.



- Para cambiar la duración de la grabación durante la grabación a un toque con temporizador, presione **[REC/OTR]** repetidamente hasta que aparezca la duración deseada.
- Para cancelar la grabación a un toque con temporizador dentro del tiempo especificado, presione **[STOP ■]**.

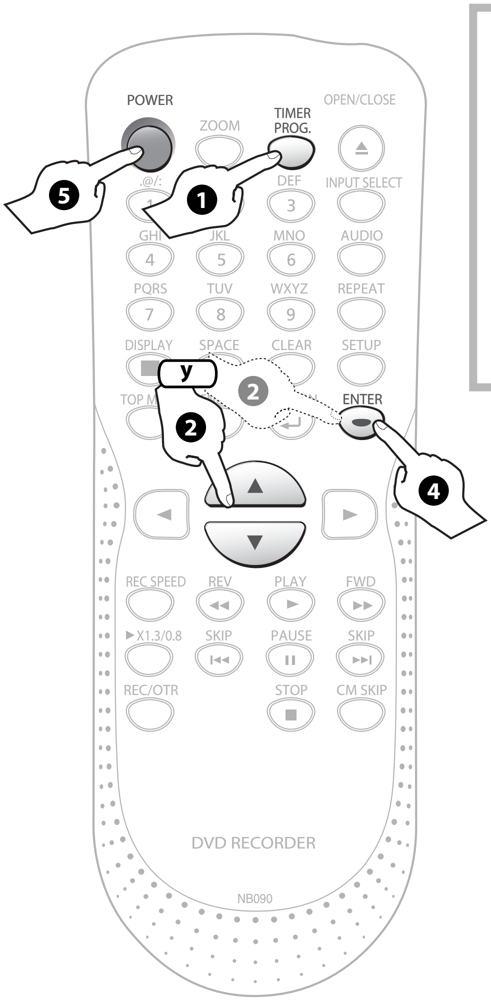
5 **Para de tener la grabación presione [STOP ■].**

Grabación con Temporizador

Usted puede programar el equipo para que grabe hasta 12 programas, con un mes de anticipación. También hay disponibles grabaciones de programas diarias o semanales.

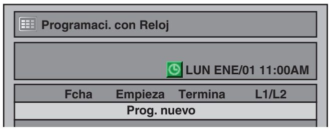
Antes de grabar, asegúrese de que

- Cuando llegue el momento en que desea empezar a grabar, conecte el sintonizador externo a ya sea L1 o L2 y configúrelo para dar salida a las señales de audio/video.
- No cambie el canal del sintonizador externo cuando esté grabando. Usted no puede mirar un canal y grabar otro al mismo tiempo.
- Antes de establecer una programación del temporizador configure el reloj.
- Inserte un disco grabable con suficiente espacio libre.


POWER
OPEN/CLOSE
ZOOM
TIMER PROG.
.@/:
DEF
INPUT SELECT
GHI
JKL
MNO
AUDIO
PQRS
TUV
WXYZ
REPEAT
DISPLAY
SPACE
CLEAR
SETUP
y
TOP M
ENTER
REC SPEED
REV
PLAY
FWD
►X1.3/0.8
SKIP
PAUSE
SKIP
REC/OTR
STOP
CM SKIP
DVD RECORDER
NB090
5
1
2
2
4

1 Presione [TIMER PROG.].

2 Utilice [▲ / ▼] para seleccionar “Prog. nuevo”, y luego presione [ENTER].



Programaci. con Reloj

LUN ENE/01 11:00AM

Fcha Empieza Termina L1/L2

Prog. nuevo

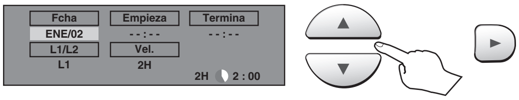
3 Configure una programación del temporizador.

4 Presione [ENTER].

5 Presione [POWER] para configurar una programación del temporizador.

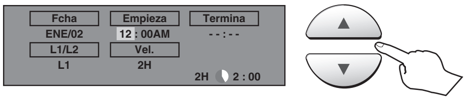
Aparecerá 🕒 en el pantalla del panel frontal.

Configure la fecha.



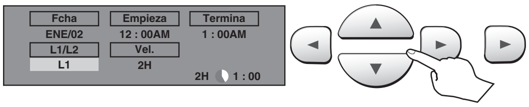
Fcha | Empieza | Termina
ENE/02 | --:-- | --:--
L1/L2 | Vel.
L1 | 2H
2H 2 : 00

Configure las horas de inicio y finalización.



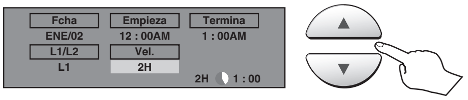
Fcha | Empieza | Termina
ENE/02 | 12 : 00AM | --:--
L1/L2 | Vel.
L1 | 2H
2H 2 : 00

Seleccione la posición adecuada de la entrada externa (L1/L2) a la cual está conectado su sintonizador externo.



Fcha | Empieza | Termina
ENE/02 | 12 : 00AM | 1 : 00AM
L1/L2 | Vel.
L1 | 2H
2H 1 : 00

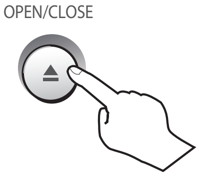
Seleccione la velocidad de grabación.



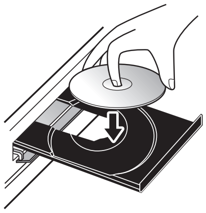
Fcha | Empieza | Termina
ENE/02 | 12 : 00AM | 1 : 00AM
L1/L2 | Vel.
L1 | 2H
2H 1 : 00

Reproducción

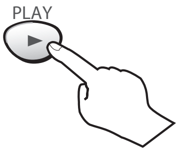
1 Abra la bandeja de discos.



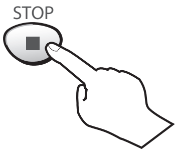
2 Inserte un disco.



3 Comience a reproducir.



4 Detenga la reproducción.



SYLVANIA

LIMITED WARRANTY

FUNAI CORP. will repair this product, free of charge in the USA in the event of defect in materials or workmanship as follows:

DURATION:

PARTS: FUNAI CORP. will provide parts to replace defective parts without charge for one (1) year from the date of original retail purchase. Certain parts are excluded from this warranty.

LABOR: FUNAI CORP. will provide the labor without charge for a period of ninety (90) days from the date of original retail purchase.

LIMITS AND EXCLUSIONS:

THIS WARRANTY IS EXTENDED ONLY TO THE ORIGINAL RETAIL PURCHASER. A PURCHASE RECEIPT OR OTHER PROOF OF ORIGINAL RETAIL PURCHASE WILL BE REQUIRED TOGETHER WITH THE PRODUCT TO OBTAIN SERVICE UNDER THIS WARRANTY.

This warranty shall not be extended to any other person or transferee.

This warranty is void and of no effect if any serial numbers on the product are altered, replaced, defaced, missing or if service was attempted by an unauthorized service center. This limited warranty does not apply to any product not purchased and used in the United States.

This warranty only covers failures due to defects in material or workmanship which occur during normal use. It does not cover damage which occurs in shipment, or failures which are caused by repairs, alterations or products not supplied by FUNAI CORP., or damage, which results from accident, misuse, abuse, mishandling, misapplication, alteration, faulty installation, improper maintenance, commercial use such as hotel, rental or office use of this product, or damage which results from fire, flood, lightning or other acts of God.

THIS WARRANTY DOES NOT COVER PACKING MATERIALS, ANY ACCESSORIES (EXCEPT REMOTE CONTROL), ANY COSMETIC PARTS, COMPLETE ASSEMBLY PARTS, DEMO OR FLOOR MODELS.

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ALL WARRANTY INSPECTIONS AND REPAIRS MUST BE PERFORMED BY AN AUTHORIZED SERVICE CENTER.

THIS WARRANTY IS ONLY VALID WHEN THE UNIT IS CARRIED-IN TO AN AUTHORIZED SERVICE CENTER.

THE PRODUCT MUST BE ACCOMPANIED BY A COPY OF THE ORIGINAL RETAIL PURCHASE RECEIPT. IF NO PROOF OF PURCHASE IS ATTACHED, THE WARRANTY WILL NOT BE HONORED AND REPAIR COSTS WILL BE CHARGED.

IMPORTANT:

THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE. IF, AT ANY TIME DURING THE WARRANTY PERIOD, YOU ARE UNABLE TO OBTAIN SATISFACTION WITH THE REPAIR OF THIS PRODUCT, PLEASE CONTACT FUNAI CORP.

ATTENTION:

FUNAI CORP. RESERVES THE RIGHT TO MODIFY ANY DESIGN OF THIS PRODUCT WITHOUT PRIOR NOTICE.

WARRANTY STATEMENT REGARDING NON AUTHORIZED REPAIRS:

To obtain warranty service, you must take the product, or deliver the product freight prepaid, in either its original packaging or packaging affording an equal degree of protection, to any AUTHORIZED SERVICE CENTER. FUNAI CORP. will not reimburse you for any service done by unauthorized service providers without prior written approval.

To locate your nearest AUTHORIZED SERVICE CENTER or for general service inquiries, please contact us at:

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