FUNAI

DV220FX5

DVD Player/VCR with Line-in Recording

Owner's Manual

DVD VIDEO

DOLBY DIGITAL

COMPACT disc DIGITAL AUDIO

VHS

FUNAI

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PRECAUTIONS

Safety Instructions

The model and serial numbers of this unit may be found on the cabinet. You should record and retain those numbers for future reference.

Model No.: _____

Serial No.: _____

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.
APPARATUS SHALL NOT BE EXPOSED TO DRIPPING OR SPLASHING AND NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS.

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 important note and rating are located on the rear or bottom of the cabinet.

IMPORTANT SAFETY INSTRUCTIONS

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

13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

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.

Disconnect the mains plug to shut off when find trouble or not in use. The mains plug shall remain readily operable.

PRECAUTIONS

CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.
WARNING: Batteries (Battery pack or battery installed) shall not be exposed to excessive heat such as sunshine, fire, or the like.

LASER SAFETY

This apparatus is classified as a CLASS 1 LASER PRODUCT.
This apparatus employs a laser. Only a qualified service person should remove the cover or attempt to service this apparatus, 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.

IMPORTANT COPYRIGHT INFORMATION

Unauthorized copying, broadcasting, public performance and lending of discs are prohibited. This item incorporates copy protection technology that is protected by U.S. patents and other intellectual property rights of Rovi Corporation. Reverse engineering and disassembly are prohibited.

Do not place the unit on the furniture that is capable of being tilted by a child and an adult leaning, pulling, standing or climbing on it. A falling unit can cause serious injury or even death.

Never use a gas duster on this unit.
The gas trapped inside of this unit may cause ignition and explosion.

To 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 an AC outlet. Grasp it by the plug.
- Do not put your fingers or objects into the unit.

Location and Handling

- Do not install the unit in direct sunlight, near strong magnetic fields, or in a place subject to dust or strong vibration.
- Avoid a place with drastic temperature changes.
- Install the unit in a horizontal and stable position. Do not place anything directly on top or bottom of the unit. Depending on your external devices, noise or disturbance of the picture and/or sound may be generated if the unit is placed too close to them. In this case, please ensure enough space between the external devices and the unit.
- Depending on the environment, the temperature of this unit may increase slightly. This is not a malfunction.
- Be sure to remove the disc and unplug the AC power cord from the outlet before carrying the unit.

Dew Condensation Warning

- Dew condensation may form inside the unit in the following conditions. If so, do not use this unit at least for a few hours until its inside gets dry.
  - The unit is moved from a cold place to a warm place.
  - Under conditions of high humidity.
  - After heating a cold room.

Note about Recycling

- This unit'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.
- For product recycling information, please visit - www.funaiamerica.com

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(480) 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(480p) DVD player, please contact our customer service center.

Trademark Information

- DOLBY DIGITAL Manufactured under license from Dolby Laboratories. Dolby and the double-D symbol are trademarks of Dolby Laboratories.
- DVD is a trademark of DVD Format/Logo Licensing Corporation.

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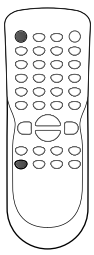
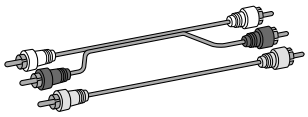
Supplied Accessories

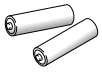
Remote Control (NB694UH)



RCA audio/video cables

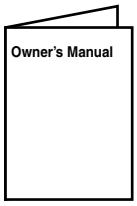


AA (1.5 V DC) battery × 2



Quick Start Guide

Owner's Manual



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Please contact Funai Corporation, Inc. for any questions or claims related to SANYO products:

1 866 212 0436 sanyo-av.com

About Cassette Tapes and Discs

Playable Media

Media Type	DVD-VIDEO	DVD-RW	DVD-R	CD-DA	CD-RW	CD-R	Cassette Tape
Logo							
Symbols used in this manual							
Recorded Signal	digital video (MPEG2)	digital video (MPEG2) or JPEG		digital audio	digital audio or JPEG		analog video

Unplayable Disc

Caution: Never play the following discs.

- DVD-RAM
- DVD-audio
- CD-i
- photo CD
- video CD
- DVD with region codes other than 1 or ALL
- DTS-CD
- DVD-ROM for personal computers
- CD-ROM for personal computers
- the discs with labels, scratches, stains, blemishes, etc.
- HD DVD
- Blu-ray disc

Caution: The sound may not be heard on the following disc.

- super audio CD

Note: • *Only the sound recorded on the normal CD layer can be delivered. The sound recorded on the high density super audio CD layer cannot be delivered.*

Any other discs without compatibility indications

Note:
- *Unfinalized discs cannot be played back.*
- *For DVD-RW/R, discs recorded in the VR (video recording) format cannot be played back. Only the finalized video format discs can be played back.*
- *Some discs cannot be played back because of incompatible recording conditions, characteristics of the recorder or special properties of discs.*
- *You can play back discs which bear the marks listed in "Playable Media". If you use nonstandardized discs, this unit may not play them back. Even if they are played back, the sound or video quality will be compromised.*
- *If the recorded portion of the disc is too small (less than 2-3/16 inches (55 mm) across), it may not play back properly.*

Region Code

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 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 be played back on the unit with the same region code.

Color System

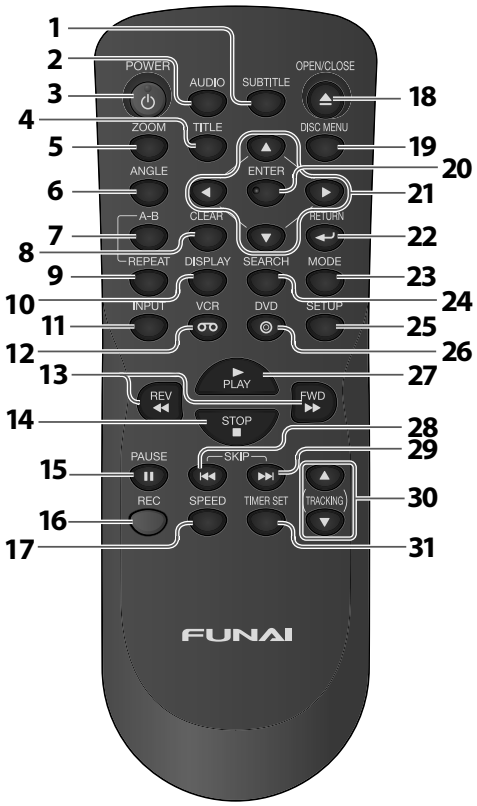
DVD is recorded in different color systems throughout the world. The most common color system is NTSC (which is used primarily in the United States and Canada).

This unit uses NTSC, so DVD you play back must be recorded in the NTSC system. You cannot play back DVD recorded in PAL color systems.

Function Overview

Remote Control

Button names described in this Owner's Manual
The instructions in this manual rest primarily on the premise that you will operate using the remote control (Please be informed that some operations can only be made on the front panel of the unit).



1. **SUBTITLE (DVD)** ⮑p.18
   - Press to select subtitles on a disc. (DVD)
   Pulse para seleccionar subtítulos en un disco. (DVD)
2. **AUDIO (DVD)** ⮑p.18
   - Press to select audio languages on a disc. (DVD)
   Pulse para seleccionar idiomas de audio en un disco. (DVD)
3. **POWER⏻** ⮑p.13
   - Press to turn on the unit, or to turn the unit into the standby mode. (To completely turn off the unit, you must unplug the AC power cord.)
   Pulse el boton para encender la unidad, o para pasar la unidad al modo de espera. (Para apagar completamente la unidad, debe desconectar el cable de alimentacion de CA.)
4. **TITLE (DVD)** ⮑p.16
   - Press to call up the top menu on disc. (DVD)
   Pulse para visualizar el menú principal del disco. (DVD)
5. **ZOOM (DVD)** ⮑p.16
   - Press repeatedly to magnify part of a picture. (1.5x, 2x, 2.5x) (DVD, JPEG)
   Pulse para amplificar parte de una imagen. (1.5x, 2x, 2.5x) (DVD, JPEG)
6. **ANGLE (DVD)** ⮑p.16
   - Press to select camera angles on a disc. (DVD)
   Pulse para seleccionar ángulos de la cámara en un disco. (DVD)
7. **A-B (DVD)** ⮑p.17
   - Press to repeat between your chosen point of A and B. (DVD, CD)
   Pulse para repetir entre los puntos de A y B que seleccionó. (DVD, CD)
8. **CLEAR** ⮑p.13
   DVD mode:
   - Press to clear numbers entered incorrectly.
   Pulse para borrar los números ingresados incorrectamente.
   - Press to cancel the point for A-B repeat. (DVD, CD)
   Pulse para cancelar el punto para repetición de A-B. (DVD, CD)

   VCR mode:
   - Press to exit the VCR menu.
   Pulse para salir del menú de VCR.
   - Press to reset the cassette tape counter.
   Pulse para restaurar el contador del casete.
9. **REPEAT** ⮑p.17
   DVD mode:
   - Press to play back a chapter / title repeatedly. (DVD)
   Pulse para reproducir un capítulo o título reiteradamente. (DVD)
   - Press to play back repeatedly. (CD, JPEG)
   Pulse para reproducir repetidamente. (CD, JPEG)

   VCR mode:
   - Press to select the repeat mode ON / OFF.
   Pulse para encender o apagar el modo de repetición.
10. **DISPLAY** ⮑p.19
    DVD mode:
    - Press to display the current disc mode.
    Pulse para visualizar el modo de disco actual.

    VCR mode:
    - Press to display the current time, cassette tape counter, and L1 / L2.
    Pulse para visualizar la hora actual, el contador del casete y L1 o L2.
11. **INPUT (VCR)** ⮑p.20
    - Press to select input "L1" / "L2".
    Pulse para seleccionar entrada "L1" o "L2".
12. **VCR ∞ (VCR)** ⮑p.13
    - Press to activate VCR mode.
    Pulse para activar el modo de VCR.
13. **REV◀◀ / FWD▶▶** ⮑p.15
    DVD mode:
    - Press to search forward / backward through a disc.
    Pulse para buscar hacia adelante o hacia atrás en el disco.
    - Press **[▶▶]**to begin slow forward playback in the pause mode. (DVD)
    Pulse [▶▶] para iniciar la reproducción lenta hacia adelante en el modo pausa. (DVD)

    VCR mode:
    - Press to forward / backward a cassette tape.
    Pulse para adelantar o retroceder un casete.
    - Press **[▶▶]** to begin slow forward playback in the pause mode.
    Pulse [▶▶] para iniciar la reproducción lenta hacia adelante en el modo pausa.
14. **STOP ■** ⮑p.14
    DVD mode:
    - Press to stop disc playback.
    Pulse para detener la reproducción del disco.

    VCR mode:
    - Press to stop the playback / recording of a cassette tape.
    Pulse para detener la reproducción o grabación de un casete.

Continued on Next Page.

15. PAUSE ❚❚ ➥p.15

DVD mode:

- Press to pause disc playback.
  Pulse para pausar la reproducción del disco.
- Press to advance the playback one frame at a time. (DVD)
  Pulse para avanzar la reproducción un cuadro por vez. (DVD)

VCR mode:

- Press to pause the playback / recording of a cassette tape.
  Pulse para pausar la reproducción o grabación de un casete.
- Press to advance the playback one frame at a time.
  Pulse para avanzar la reproducción un cuadro por vez.

16. REC (VCR) ➥p.20

- Press to start recording or press repeatedly to activate the One-touch Timer Recording.
  Pulse para comenzar a grabar o pulse reiteradamente para activar la grabación rápida con temporizador.

17. SPEED (VCR) ➥p.20

- Press to select the recording speed.
  Pulse para seleccionar la velocidad de grabación.

18. OPEN/CLOSE ⏏ ➥p.20

DVD mode:

- Press to open or close the disc tray.
  Pulse para abrir o cerrar la bandeja del disco.

VCR mode:

- Press to remove the videotape from the cassette compartment.
  Presiónelo para retirar la cinta de video del compartimiento del casete.

19. DISC MENU (DVD) ➥p.16

- Press to call up the disc menu on a disc. (DVD)
  Pulse para visualizar el menú del disco en un disco. (DVD)
- Press to display the thumbnail when a disc with JPEG files is inserted and the file is highlighted. (JPEG)
  Pulse para visualizar la miniatura cuando insertó un disco con archivos JPEG y algún archivo está resaltado. (JPEG)

20. ENTER (DVD) ➥p.16

- Press to confirm the items.
  Pulse para confirmar los ítems.

21. ▲ / ▼ / ◀ / ▶ ➥p.16

DVD mode:

- Press to select items / settings.
  Pulse para seleccionar ítems o ajustes.
- Press to enter values in the input field.
  Pulse para especificar valores en el campo de entrada.
- Press to rotate the picture during playback of JPEG files. (JPEG)
  Pulse para girar la imagen en la reproducción de archivos JPEG. (JPEG)

VCR mode:

▲ / ▼ :

- Press to select an item on the VCR menu.
  Pulse para seleccionar un ítem en el menú de la VCR.

◀ :

- Press to go back one step during clock and timer programming.
  Pulse para retroceder un paso durante la programación del reloj y el temporizador.

▶ :

- Press to proceed to the next VCR menu item / step.
  Pulse para ir al siguiente menú de VCR.

22. RETURN ↩ (DVD) ➥p.19

- Press to call up the menu when playing back a disc. (DVD)
  Pulse para volver al menú o pantalla anteriormente visualizado. (DVD)
- Press to return to the file list when thumbnail is displayed. (JPEG)
  Pulse para volver a la lista de archivos mientras se visualiza la miniatura. (JPEG)

23. MODE (DVD) ➥p.18

- Press to play back randomly. (CD)
  Pulse para reproducir al azar. (CD)

24. SEARCH ➥p.16

DVD mode:

- Press to search chapter / title. (DVD)
  Pulse para buscar un capítulo o título. (DVD)
- Press to search tracks or files. (CD, JPEG)
  Pulse para buscar pistas o archivos. (CD, JPEG)
- Press to search time. (DVD, CD)
  Pulse para buscar la hora. (DVD, CD)

VCR mode:

- Press to call up the index or time search menu.
  Pulse para visualizar el menú de búsqueda de hora o el índice.

25. SETUP ➥p.23

DVD mode:

- Press to call up the DVD menu.
  Pulse para visualizar el menú de DVD.

VCR mode:

- Press to call up the VCR menu.
  Pulse para visualizar el menú de VCR.

26. DVD ◎ (DVD) ➥p.14

- Press to activate DVD mode.
  Pulse para activar el modo de DVD.

27. PLAY ▶ ➥p.14

- Press to begin the playback of a disc / a cassette tape.
  Pulse para comenzar la reproducción de un disco o casete.

28. SKIP |◀◀ (DVD) ➥p.15

- Press to go back to the previous chapters / titles. (DVD)
  Pulse para volver a los capítulos o títulos anteriores. (DVD)
- Press to skip tracks or files. (CD, JPEG)
  Pulse para saltar pistas o archivos. (CD, JPEG)
- Press to switch between pages when thumbnail is displayed. (JPEG)
  Cuando se visualice la miniatura, presione el interruptor entre páginas. (JPEG)

29. SKIP ▶▶| (DVD) ➥p.15

- Press to skip chapters / titles. (DVD)
  Pulse para saltar capítulos o títulos. (DVD)
- Press to skip tracks or files. (CD, JPEG)
  Pulse para saltar pistas o archivos. (CD, JPEG)
- Press to switch between pages when thumbnail is displayed. (JPEG)
  Cuando se visualice la miniatura, presione el interruptor entre páginas. (JPEG)

30. TRACKING ▲/ ▼ (VCR) ➥p.15

- Press either one of the buttons to stabilize the picture manually or the picture begins to vibrate vertically during the pause mode.
  Pulse cualquiera de los botones para estabilizar la imagen de forma manual si ésta comienza a vibrar de forma vertical durante el modo pausa.

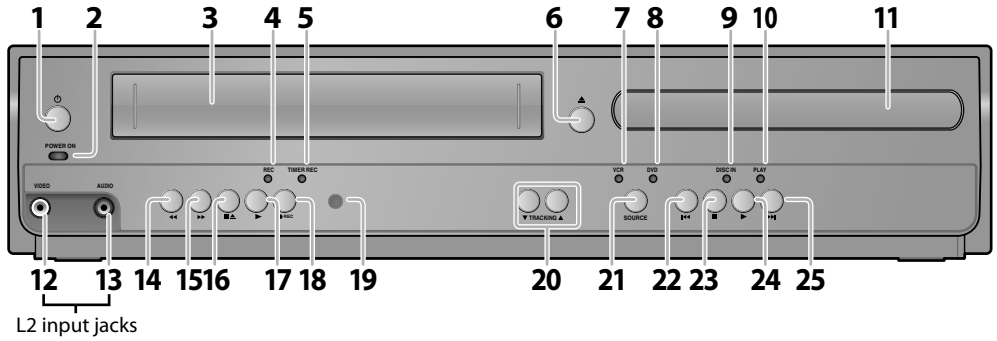
31. TIMER SET (VCR) ➥p.21

- Press to put the VCR into standby mode for a timer recording.
  Pulse para colocar el VCR en modo espera para una grabación con temporizador.

Note:

- *This unit will automatically turn on the screen saver after 5 minutes of inactivity.*
- *Only when the timer standby mode has been set, the unit will automatically turn into the standby mode after 25 minutes of inactivity.*

Front Panel



1. ⏻ ➥p.14
- Press to turn On the unit, or to turn the unit into the Standby mode. (To completely turn Off the unit, you must unplug the AC power cord.)

2. POWER ON indicator
- Lights up when the unit is turned On.

3. Cassette Compartment (VCR) ➥p.14
- Insert a cassette tape here.

4. REC indicator (VCR)
- Lights up during a Recording, OTR (One-touch Timer Recording) or Timer Recording.
- Blinks when a Recording is paused.

5. TIMER REC indicator (VCR) ➥p.21
- Lights up when a Timer Recording or OTR (One-touch Timer Recording) has been set.
- Blinks when a Timer Recording or OTR (One-touch Timer Recording) has been finished or if the unit could not complete the Recording due to some error.

6. ⏏ (DVD) ➥p.14
- Press to Open / Close the disc tray.

7. VCR output indicator (VCR)
- Lights up when the unit is in the VCR mode.

8. DVD output indicator (DVD)
- Lights up when the unit is in the DVD mode.

9. DISC IN indicator (DVD)
- Lights up when the disc is in the disc tray.

10. PLAY indicator (DVD)
- Lights up when the inserted disc is being played back.

11. Disc tray (DVD) ➥p.14
- Place a disc when it is open.

12. VIDEO IN jack (VCR) ➥p.22
- Connect an RCA video cable from the video output jack of your camcorder and other such devices here.

13. AUDIO IN jack (VCR) ➥p.22
- Connect an RCA monaural audio cable from the audio output jack of your camcorder and other such devices here.

14. ◀◀ (VCR) ➥p.15
- Press to rewind the cassette tape or to view the picture rapidly in reverse during playback (rewind search).

15. ▶▶ (VCR) ➥p.15
- Press to rapidly advance the cassette tape or view the picture rapidly in forward during playback (forward search).

16. ■ ⏏ (VCR) ➥p.14

■:
- Press to Stop the Playback / Recording of a cassette tape.

⏏:
- Press to remove the cassette tape from the cassette compartment.

17. ▶ (VCR) ➥p.14
- Press to Start the Playback of a cassette tape.

18. ● REC (VCR) ➥p.20
- Press once to Start a Recording.
- Press repeatedly to activate an OTR (One-touch Timer Recording).

19. Infrared Sensor Window ➥p.9
- Receive signals from the Remote Control so that you can control the unit from a distance.

20. TRACKING ▲/▼ (VCR) ➥p.15
- Press either one of the buttons to stabilize the picture if the picture begins to vibrate vertically during the cassette tape playback.

21. SOURCE
- Press to switch to either DVD / VCR mode.

22. |◀◀ (DVD) ➥p.15
- Press to go back to the Previous Chapters / Titles / Tracks during Playback.
- Press and hold it to begin Fast Reverse Search.

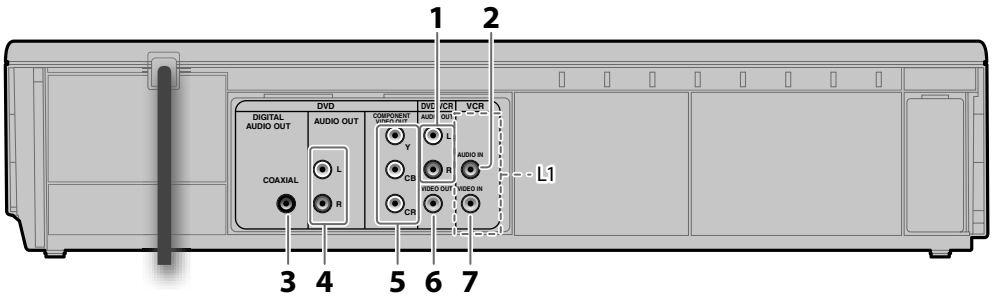
23. ■ (DVD) ➥p.14
- Press once to Stop disc playback temporarily.

24. ▶ (DVD) ➥p.14
- Press to Start / Resume Playback.

25. ▶▶| (DVD) ➥p.15
- Press to Skip Chapters / Titles / Tracks during Playback.
- Press and hold it to begin Fast Forward Search.

Note:
- *You can turn On the unit by pressing the buttons 6 or 24 (circled ones) or by inserting a cassette tape.*
- *If you turn Off this unit, [⏏] on the Remote Control is not available. Be sure to use [⏏] or [■ ⏏] on the unit.*

Rear Panel



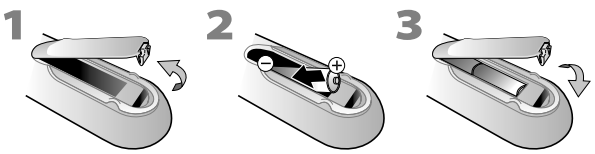
1. **DVD/VCR AUDIO OUT jack** ➥p.10
   - Connect an RCA audio cable from here to the audio input jack on your television or audio device. Standard connection for DVD/VCR use.
2. **VCR AUDIO IN jack** ➥p.22
   - Connect an RCA audio cable from the audio output jack on your camcorder, VCR, etc. to here.
3. **DIGITAL AUDIO OUT COAXIAL* jack** ➥p.12
   - Connect a digital audio coaxial cable from here to the digital audio coaxial in jack on a decoder or audio receiver.
4. **DVD AUDIO OUT* (analog) jack** ➥p.11
   - Connect an RCA audio cable from here to the audio input jack on your television or audio device.
5. **COMPONENT VIDEO OUT* jacks** ➥p.11
   - Connect component video cables from here to the component video input jacks on your television.
6. **DVD/VCR VIDEO OUT jack** ➥p.10
   - Connect an RCA video cable from here to the VIDEO input jack of your television or audio device. Standard connection for DVD/VCR use.
7. **VCR VIDEO IN jack** ➥p.22
   - Connect an RCA video cable from here to the video output jack on your camcorder, VCR, etc.

* For enhanced DVD viewing. DVD/VCR video and audio connection required to view cassette tapes.

Note: • *RCA audio and video cables are included for both VCR and DVD viewing. You can enhance your DVD picture and sound quality with component video cables or a digital audio coaxial cable.* ***Please purchase the necessary cables at your local store.*** *(Refer to pages 11-12.)*

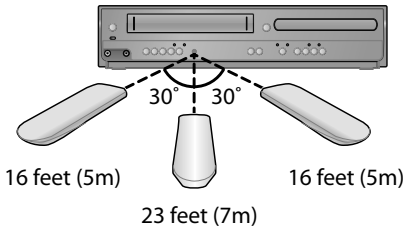
Installing the Batteries in the Remote Control

Install the 2 AA (1.5 V) batteries matching the polarity indicated inside battery compartment of the remote control.



Keep the following in mind when using the remote control:

- Make sure that there are no obstacles between the remote control and the infrared sensor window on the unit.
- The maximum operable ranges of the unit are:
  - **Line of sight**: approx. 23 feet (7m)
  - **Either side of center**: approx. 16 feet (5m) within 30°
  - **Above**: approx. 16 feet (5m) within 15°
  - **Below**: approx. 10 feet (3m) within 30°



Caution: Never throw batteries into a fire.

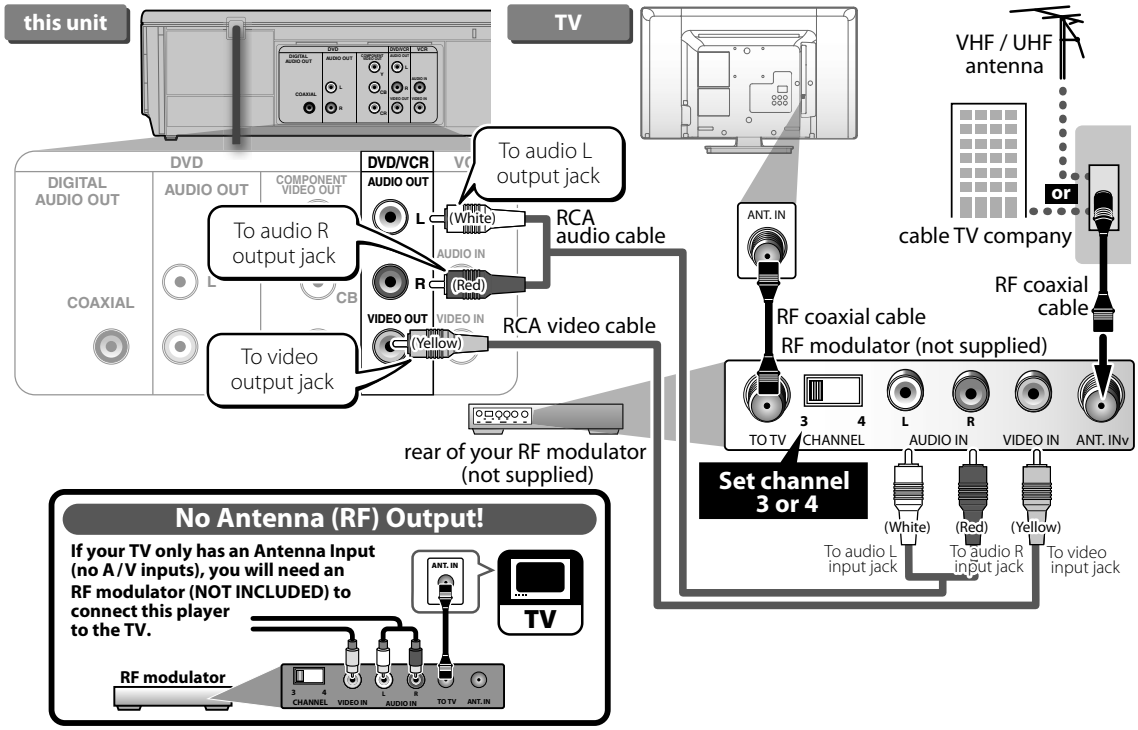
Note: • *Do not mix different types of batteries together (e.g., Alkaline and Carbon-Zinc) or old batteries with fresh ones. Although they may look similar, different batteries may have different voltages.*
- *If the remote control is not to be used for a long period of time, remove the batteries to prevent damage or injury from possible battery leakage.*
- *Do not try to recharge batteries; they can overheat and rupture.*
- *Batteries should always be disposed of with the environment in mind. Always dispose of batteries in accordance with applicable laws and regulations.*

Connections

Connection to a TV

If Your TV Has an Antenna In Jack Only

Before connecting, make sure the Power on the devices is turned Off.



No Antenna (RF) Output!

If your TV only has an Antenna Input (no A/V inputs), you will need an RF modulator (NOT INCLUDED) to connect this player to the TV.

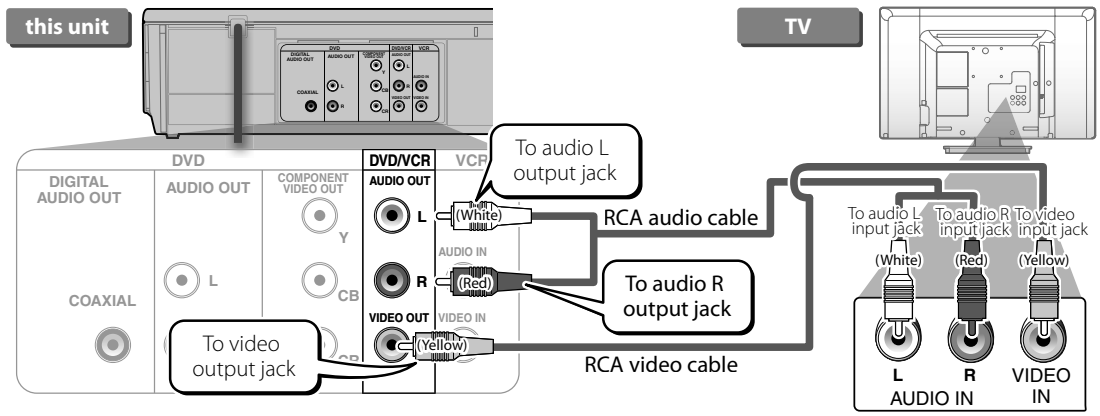
After making the connection illustrated above;

1) Set your RF modulator's channel 3/4 switch to either 3 or 4, whichever the TV channel is least used in your area.

2) Turn on your TV and choose the same channel as you set the RF modulator's channel 3/4 switch to.

Note: • *The quality of picture may become poor if this unit is connected to an RF modulator.*

VCR and Basic DVD Connection



Note: • *Connect this unit directly to your TV. If an RCA audio/video cables are connected to a VCR, pictures may be distorted due to the copy protection system.*

Supplied cables used in this connection are as follows:

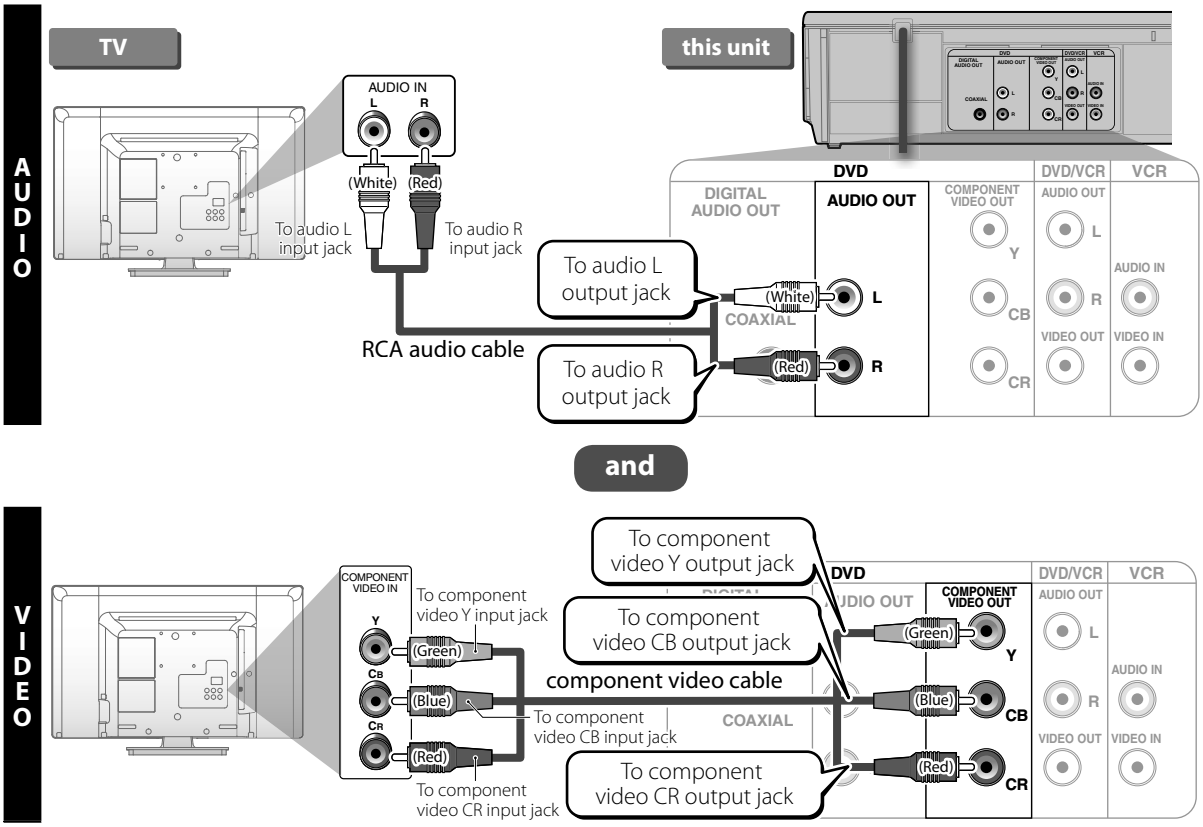
- RCA audio cable (L/R) x 1
- RCA video cable x 1

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

After connecting to your TV:
You will need to switch to video input on your TV. This is usually marked TV/VIDEO, INPUT or AUX.
Please refer to your TV's owner's manual for details.
Input modes for common TV brands:
Listed below are inputs for common brand name TV's.

Admiral:	AUX	KENWOOD:	AUX	Samsung:	TV/VIDEO
Curtis Mathis:	LINE1, LINE2, 00, 90, 91, 92, 93	LXI-Series:	00	SANYO:	VIDEO
		Funai:	AUX CHANNEL	SHARP:	00
GE:	INPUT, TV/VCR, 00, 90, 91, 92, 93	Panasonic:	TV/VIDEO	SONY:	VIDEO1, VIDEO2, VIDEO3
		RCA:	INPUT, TV/VCR, 00, 90, 91, 92, 93	TOSHIBA:	TV/GAME
HITACHI:	INPUT, AUX			Zenith:	00
JVC:	VIDEO, VIDEO1, VIDEO2, VIDEO3				

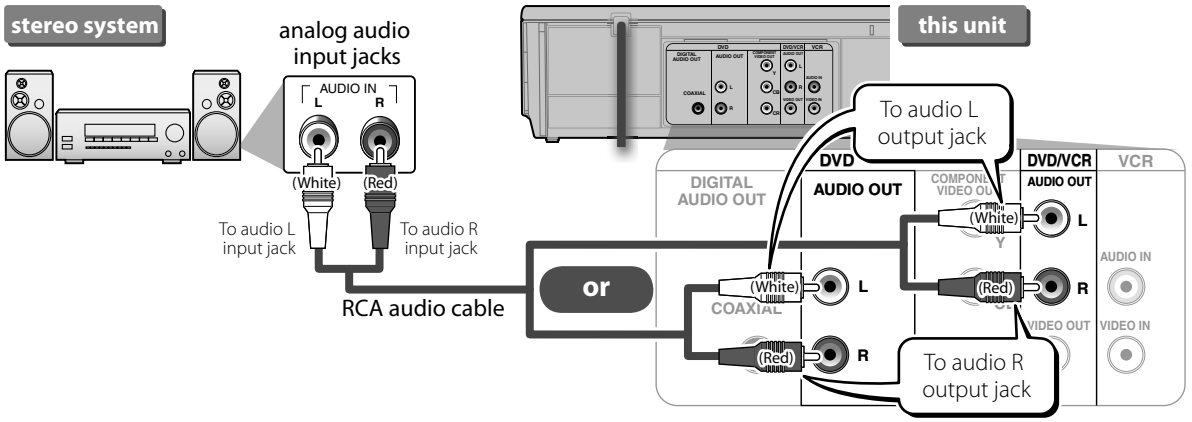
Available on DVD Only



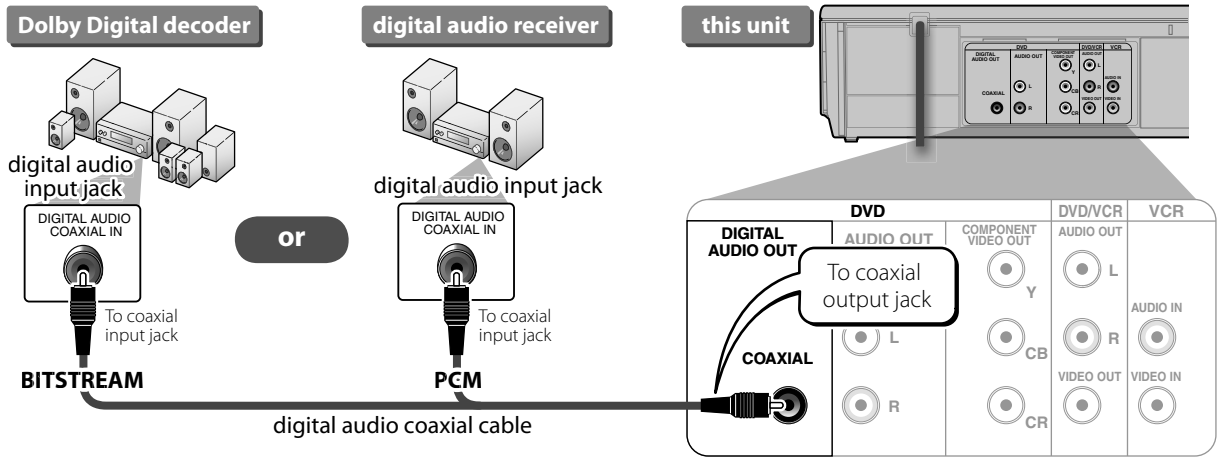
Supplied cables used in this connection are as follows:
• RCA audio cable (L/R) x 1
Please purchase a component video cable at your local store.

Connection to an Audio System

Playing Analog Audio



Playing Digital Audio



* You must select "BITSTREAM" or "PCM" in "DOLBY DIGITAL" setting. (Refer to page 24.)

Audio recording format of the disc		"Dolby Digital" setting on this unit	Actual output
DVD-video	Dolby Digital	PCM	2channel PCM
		BITSTREAM	Dolby Digital
	LPCM	PCM	2channel PCM
		BITSTREAM	

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.*
- *Playing back a DVD using incorrect settings may generate noise distortion and may also damage the speakers.*

Supplied cables used in this connection are as follows:

• RCA audio cable (L/R) x 1

Please purchase a digital audio coaxial cable at your local store.

Initial Setups

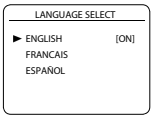
Turning On Unit for the First Time

Please note: most instructions in this manual refer to remote control use.

1 Be sure your TV's input is set to VIDEO. (Name may vary with TV manufacturer. See your TV manual for details.)

2 Press POWER.
- "LANGUAGE SELECT" menu appears.

3 Use ▲ / ▼ to select your on-screen language.
Then press ▶ to continue.



4 When "CLOCK SET" menu appears,
go to step **2** in "Clock Setting" on this page.

To Change the Selected On-screen Language

Press VCR first.

1 Press SETUP until the main menu appears.

2 Use ▲ / ▼ to select "LANGUAGE SELECT".
Then press ▶ to go to next step.

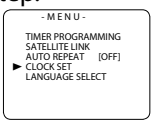
3 Use ▲ / ▼ to select "ENGLISH", "FRANCAIS" or "ESPAÑOL".
Then press CLEAR.

Note: • *If you accidentally select Spanish or French and need English:*
Press **[SETUP]** *and choose "SELEC. IDIOMA" or "SELECTION LANGUE". Press cursor* **[▶]** *and select "ENGLISH". Finally, press* **[CLEAR]**.

Clock Setting

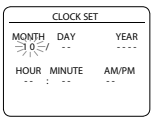
Press VCR first.

1 Press SETUP and Use ▲ / ▼ to select "CLOCK SET".
Then press ▶ to go to next step.

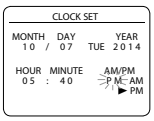


- If the clock is not set yet, the "CLOCK SET" menu appears when you press SETUP. In this case, go to step **2**.

2 Use ▲ / ▼ to select the contents to suit your preference.
Then press ▶ to go to the next item.



3 Use ▲ / ▼ to select "AM" or "PM".



4 Press SETUP to exit the "CLOCK SET" menu.

Note: • *To go back, press* **[◀]** *during steps* **2** *to* **3**.
• *Clock setting will be lost after a power failure or this unit has been unplugged for more than 30 seconds.*

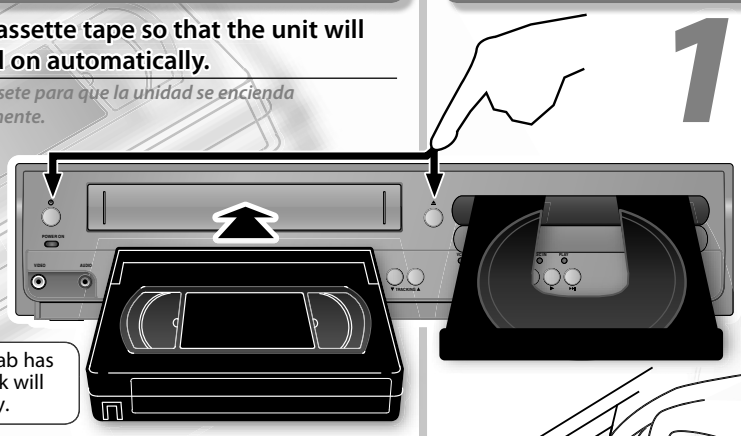
BASIC PLAYBACK

Before: Turn on the TV.

For VCR Playback

1 **Insert a cassette tape so that the unit will be turned on automatically.**

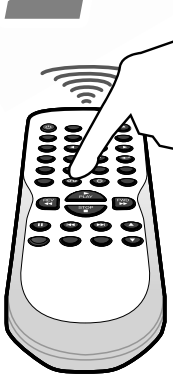
Inserte un casete para que la unidad se encienda automáticamente.



• If the protection tab has removed, playback will start automatically.

2 **Press VCR to switch to the VCR mode.**

Para cambiar al modo de VCR, pulse VCR.

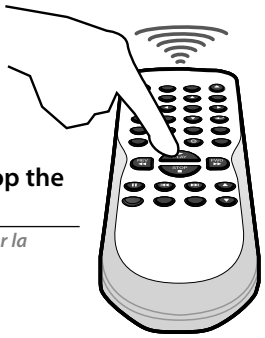


REMEMBER

- You need to press VCR first every time you operate any of VCR features.
- When using DVD AUDIO OUT jack, DIGITAL AUDIO OUT COAXIAL jack and COMPONENT VIDEO OUT jack, no VCR audio / video will be output.

3 **Press PLAY to start playback.**

Pulse PLAY para comenzar la reproducción.



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

Pulse STOP para detener la reproducción.

For advanced playback, refer to the following pages.

- Time Search ➥p.17
- Index Search ➥p.17
- Auto Repeat ➥p.17

Note:

- *To prevent damage to the cassette tape, pause or slow mode will automatically stop after 5 minutes.*
- *To return to playback from the picture search, pause or slow mode, press PLAY.*

For Disc Playback

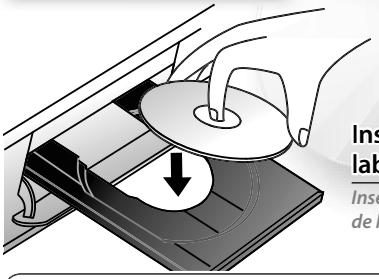
1 **Press ⏻ to turn on the unit.**

Then press ⏏.

Para encender la unidad, pulse ⏻. Luego pulse ⏏.

2 **Insert a disc with its label side facing up.**

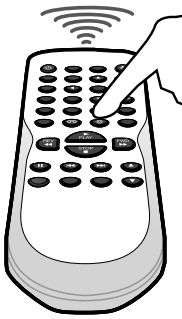
Inserte un disco con el lado de la etiqueta hacia arriba.



- Depending on the disc, playback will start automatically without pressing PLAY.
- In case the DVD is recorded on both sides, make sure the label of the side you want to playback is facing up.

3 **Press DVD to switch to the DVD mode.**

Pulse DVD para cambiar al modo de DVD.



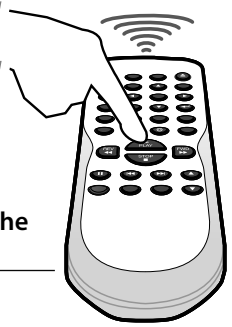
REMEMBER

- You need to press DVD first every time you operate any of DVD functions / features.

Press PLAY to start playback.

Pulse PLAY para comenzar la reproducción.

4



5 **Press STOP to stop the playback.**

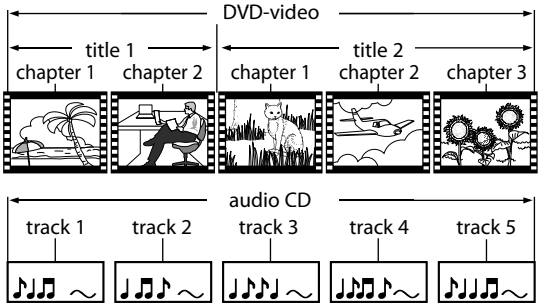
Pulse STOP para detener la reproducción.

For advanced playback, refer to the following pages.

- Disc Menu ➥p.16
- Pause Mode ➥p.15
- Zoom ➥p.16
- Search Functions ➥p.16
- JPEG Playback ➥p.18
- Resume Playback ➥p.16
- Step-by-step Playback ➥p.15
- Repeat Playback ➥p.17
- Angle ➥p.16
- Random Playback ➥p.18

Hint for Disc Playback

The contents of DVD are generally divided into “titles”.
Titles may be further subdivided into “chapters”.
The audio CD contains “tracks”.



Fast Forward / Fast Reverse Playback

DVD CD Press DVD first.

Press **[FWD►►]** or **[REV◄◄]** repeatedly during playback to select the desired forward or reverse speed.

Using [I◄◄], [►►I] on this unit

Pressing and holding **[I◄◄]** or **[►►I]** on this unit will also change forward or reverse playback speed.

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

VHS Press VCR first.

Press **[FWD►►]** or **[REV◄◄]** (**[►►]** or **[◄◄]** on this unit) during playback.

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

Note:

- *For DVD and audio CD, fast forward or fast reverse speed is different depending on the disc. Approximate speed is x2, x4, x8 and x20.*
- *For VCR, press* **[FWD►►]** *again so the unit will search at higher-speed (in the SLP mode only).*

Pause and Step-by-step Playback

DVD CD JPEG Press DVD first.

Press **[PAUSE❚❚]** during playback.

DVD only

The picture goes forward by one frame each time you press **[PAUSE❚❚]** in the pause mode.

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

VHS Press VCR first.

Press **[PAUSE❚❚]** during playback.

The picture goes forward by one frame each time you press **[PAUSE❚❚]** in the pause mode.

- If the picture is distorted or rolling vertically, adjust the vertical hold control on your TV if equipped.

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

Note:

- *For VCR, to prevent damage to the cassette tape, pause mode will automatically stop after 5 minutes.*

Slow Forward Playback

DVD Press DVD first.

Press **[PAUSE❚❚]** during playback, then press **[FWD►►]** repeatedly to select the desired forward speed.

Using [►►I] on this unit

Pressing and holding **[►►I]** on this unit in the pause mode will also change forward playback speed.

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

VHS Press VCR first.

Press **[PAUSE❚❚]** during playback, then press **[FWD►►]**. (**[►►]** on this unit.)

- Press **[FWD►►]** or **[REV◄◄]** (**[►►]** or **[◄◄]** on this unit) to change the speed.
- If the distorting picture appears, you can adjust it by using **[TRACKING ▲/▼]**.

Press **[PLAY►]** to return to the normal playback.

Note:

- *For DVD, slow forward speed is different depending on the disc.*
  Approximate speed is x1/2, x1/4 and 1/8.
- *For VCR, to prevent damage to the cassette tape, slow mode will automatically stop after 5 minutes.*

To Skip Titles, Chapters, Tracks or Files

DVD CD JPEG Press DVD first.

Press **[SKIP I◄◄]** or **[SKIP ►►I]** during playback to skip titles, chapters, tracks or files to a desired point.

Using [I◄◄], [►►I] on this unit

Pressing **[I◄◄]** or **[►►I]** on this unit will also skip titles, chapters, tracks or files to a desired point.

To Reset the Cassette Tape Counter (Counter Reset)

VHS Press VCR first.

Press **[DISPLAY]** to display the cassette tape counter on the TV screen. Then, press **[CLEAR]** to reset the counter to “0:00:00”.

Note:

- *This function is not available if the unit begins the timer recording or one-touch timer recording.*

To Rewind the Cassette Tape automatically (Auto Rewind)

VHS Press VCR first.

When a cassette tape ends during playback, fast-forward or normal recording, the unit will automatically rewind to the beginning of the cassette tape. After rewinding finishes, the unit will eject the cassette tape.

ADVANCED PLAYBACK

Disc Menu

DVD Press DVD first.

Some discs contain menus which allow you to customize DVD playback. Use **[▲ / ▼ / ◄ / ►]** to select an item, then press **[ENTER]**.

Calling Up a Menu Screen During Playback

DVD Press DVD first.

- Press **[DISC MENU]** to call up the disc menu.
- Press **[TITLE]** to call up the title menu.

Note: *• Menu operations may vary depending on the disc. Refer to the manual accompanying the disc for details.*

Resume Playback

DVD CD Press DVD first.

1) Press **[STOP■]** during playback. PRE STOP icon will appear on the TV screen.
2) Press **[PLAY►]**, RESUME icon will appear at the top-left on the TV screen and playback will resume from the point at which playback was stopped.

Note: *• To cancel resume, press* **[STOP■]** *one more time in the stop mode.*
• The resume playback information stays on even when the power is turned off, as long as the disc stays in the unit.

Zoom

DVD JPEG Press DVD first.

1) Press **[ZOOM]** repeatedly during playback to select the desired zoom factor: ZOOM 2(x1.5), ZOOM 3(x2), ZOOM 4(x2.5).
2) Use **[▲ / ▼ / ◄ / ►]** to slide the zoomed picture across the TV screen.
3) To exit zoom mode, press **[ZOOM]** repeatedly to select "ZOOM 1(Off)".

Note: *• Zoom function does not work while the disc menu is displayed.*
• Some part of the picture may not be zoomed depending on the Disc or playback status.

Camera Angles

Some DVD may contain scenes which have been shot simultaneously from the various angles. You can change the camera angle if appears on the TV screen.

DVD Press DVD first.

1) During playback, press **[ANGLE]**.
Each time you press **[ANGLE]**, camera angle changes.

Track / File Search

CD JPEG Press DVD first.

1) Press **[SEARCH]**.

Available Search Mode	Displayed list
Track Search	CD
File Search	File List / Thumbnail JPEG

2) Enter the desired track or file number.

e.g.) CD

- Displayed digit differs depending on the contents. The same number of digits that are stored on the disc must be entered.
- Press **[◄]** or **[►]** to move the digit that you wish to change.
- Press **[▲]** or **[▼]** to change the number.

3) Press **[ENTER]**.

Note: *• The random playback will be cleared when you select track search during random playback (for CD only).*

Title / Chapter Search

DVD Press DVD first.

1) Press **[SEARCH]**.
2) Enter the desired title or chapter number.

- For the chapter search, press cursor **[►]** to highlight the chapter number.
- Title number is displayed with 2-digit, Chapter number is displayed with 3-digit.
- Press **[◄]** or **[►]** to move the digit that you wish to change.
- Press **[▲]** or **[▼]** to change the number.

3) Press **[ENTER]**.

Note: *• Some discs only allow you to search by a chapter number.*

Button Select Search

DVD Press DVD first.

Some DVD-videos have button menus to jump to each button displayed scene. During playback the scenes which have the button menu, you can enter the button number by using the Button Select Menu of 3-digit.

1) Press **[SEARCH]**.
2) Enter the number you want to jump to.

- Press **[◄]** or **[►]** to move the digit that you wish to change.
- Press **[▲]** or **[▼]** to change the number.

3) Press **[ENTER]**.
Playback of the selected scene will start.

4) Use **[▲]** or **[▼]** to enter the number you want to jump to.
   • To move the digit that you wish to change, press **[◀]** or **[▶]**.
5) After all digit numbers are entered, press **[ENTER]**. Playback of the selected scene will start.

Index Search

VHS Press VCR first.

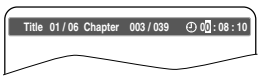
1) Press **[SEARCH]**.
2) Use **[▲]** or **[▼]** to select a desired index number.
3) Press **[◀]** to Fast Rewinding or **[▶]** to Fast Forwarding.
4) When the cassette tape has reached an index mark, playback will start automatically.

Note:
- *The time gap between index marks must be more than 1 minute for SP mode, 2 minutes for LP mode and 3 minutes for SLP mode.*
- *The index search is not available during recording.*
- *Press* **[STOP■]** *to stop the search.*
- *If a cassette tape ends during a search, the index search will be cancelled and the unit will rewind to the beginning of the cassette tape.*

Time Search

DVD CD Press DVD first.

1) Press **[SEARCH]**.
2) Press cursor **[▶]** to highlight the time.
3) Enter the desired time.



e.g.) DVD

- Press **[◀]** or **[▶]** to move the digit that you wish to change.
- Press **[▲]** or **[▼]** to change the number.

4) Press **[ENTER]**.

VHS Press VCR first.

1) Press **[SEARCH]** twice.
2) Use **[▲ / ▼]** to select a desired time. Then, press cursor **[▶]** to Fast Forward, or press **[◀]** to Fast Rewind. When the cassette tape is reaches to the selected time, playback will start automatically.

Note:
- *For DVD and audio CD, press* **[CLEAR]** *to erase the incorrect input at step 3.*
- *For audio CD, the random playback will be cleared when you select time search during random playback.*
- *For VCR, press* **[STOP■]** *to stop the search.*
- *For VCR, if a cassette tape ends during a search, the time search will be cancelled and the unit will rewind to the beginning of the cassette tape.*
- *The time search is not available during recording of the VCR.*

Repeat Playback

DVD CD JPEG Press DVD first.

Repeat function is available only during playback.
Each time you press **[REPEAT]**, repeat function changes as example below.

DVD

REP OFF (Repeat Off)
↓
REP CHAPTER (Current Chapter Repeat)
↓
REP TITLE (Current Title Repeat)
↓
REP ALL (Entire Disc Repeat)

CD

REP OFF (Repeat Off)
↓
REP 1 (Current Track Repeat)
↓
REP ALL (Entire Disc Repeat)

JPEG

REP OFF (Repeat Off)
↓
REP 1 (Current Track Repeat)
↓
REP DIR (Current Folder Repeat)
↓
REP ALL (Entire Disc Repeat)

Repeat A-B Playback

DVD CD Press DVD first.

1) During playback, press **[A-B]** at your desired starting point as point A.
2) Press **[A-B]** at your desired ending point as point B.
3) Press **[A-B]** to exit the sequence so that "A-B CANCEL" appears.

Note:
- *Point B should be in the same title or track as point A.*
- *To cancel point A, press* **[CLEAR]** *at step 1.*
- *Repeat A-B playback is not available with some discs.*

Auto Repeat Playback

The unit will automatically rewind the cassette tape when it has reached the end and will automatically start playback unless you press **[STOP ■]** or you turn off the unit.

VHS Press VCR first.

1) In stop mode, press **[SETUP]**.
2) Use **[▲]** or **[▼]** to select "AUTO REPEAT".
3) Press cursor **[▶]** to "AUTO REPEAT" to set "ON".
4) Press **[SETUP]** to exit.

Note:
- *The auto repeat can also be set to "ON" or "OFF" by pressing* **[REPEAT]** *on the remote control.*
- *To cancel auto repeat, follow step 1 above. Then, press cursor* **[▶]** *so that "OFF" appears beside "AUTO REPEAT". Press* **[SETUP]** *to exit.*
- *The auto repeat playback will start automatically if you select "AUTO REPEAT" to "ON" in the stop mode.*

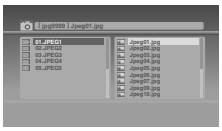
JPEG Playback

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

JPEG Press DVD first.

Insert a JPEG formatted disc, then the File List will automatically appear on the TV screen. (For a disc with JPEG files only)

1) Use **[▲]** or **[▼]** to select the desired file.
   • Use **[▲ / ▼ / ◄ / ►]** to select another folder, press **[ENTER]**.



2) Press **[ENTER]** or **[PLAY►]**.
   Playback will start from the file you selected.

It is recommended that the files are recorded under the following conditions :

Applicable JPEG file
Normal playback Pixel upper limit: 6,000 × 6,000 pixel Pixel lower limit: 96 × 96 pixel
Remarks
A JPEG image that extends beyond the screen is reduced so that it will be displayed within the screen.

Note:
- *Some selections may take a while to be recognized.*
- *Refer to "On-Screen Display" on page 19 for more details.*
- *A maximum of 40 folders or 9,999 files may be recognized on one disc. (ISO9660 format files) For UDF format files recorded on DVD media, maximum of 2,000 files may be recognized. It may take a while to switch between pages for a file list.*
- *To rotate the picture, press the cursor buttons during playback of JPEG files.*

Random Playback

This function shuffles the playing order of tracks instead of playing back in sequence.

CD Press DVD first.

1) During playback, press **[MODE]**.

Note:
- *During random playback, you cannot go back to the previous track. Pressing* **[SKIP ►►I]** *allows you to search tracks randomly.*

Settings

Subtitle Language

DVD Press DVD first.

This unit allows you to select a subtitle language **(if available)** during DVD Playback.

1) Each time you press **[SUBTITLE]**, subtitle language changes as example below.

→ : **Off** (No Subtitle)
↓
: **1 English** (English Subtitle)
↓
: **2 French** (French Subtitle)
↓
⋮

Note:
- *If your language is not shown after pressing* **[SUBTITLE]** *several times, the disc may not have that language. However, some discs allow subtitle language setting on the disc menu. (Operation varies depending on the disc, so refer to the manual along with the disc.)*
- *When "INVALID ENTRY" appears on the TV screen, it means no subtitle is recorded on the scene.*
- *Some discs will only allow you to change the subtitle from the disc menu. Refer to the manual accompanying the discs for details.*

Audio Language

DVD Press DVD first.

This unit allows you to select an audio language **(if multiple languages are available on a disc)** during DVD Playback.

1) Each time you press **[AUDIO]**, audio language changes as example below.

→ : **1 English** (English Audio)
↓
: **2 French** (French Audio)
↓
: **3 Spanish** (Spanish Audio)
↓
⋮

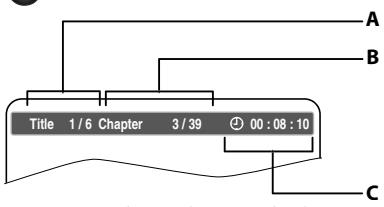
Note:
- *If your language is not shown after pressing* **[AUDIO]** *several times, the disc may not have that language. However, some discs allow audio language setting on the disc menu. (Operation varies depending on the disc, so refer to the manual along with the disc.)*
- *Some discs will only allow you to change the audio setting from the disc menu. Refer to the manual accompanying the discs for details.*

On-Screen Display

You can check the information about the current disc by pressing **[DISPLAY]**. **Press DVD first.**

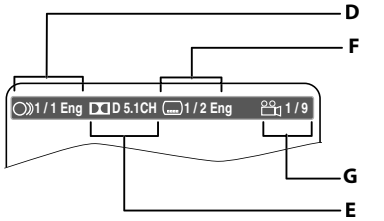
DVD

1 DISPLAY



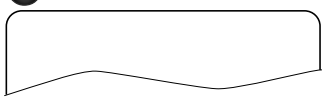
A: Current Title Number / Total Titles
B: Current Chapter Number / Total Chapters
C: Elapsed Time of the Current Time

2 DISPLAY



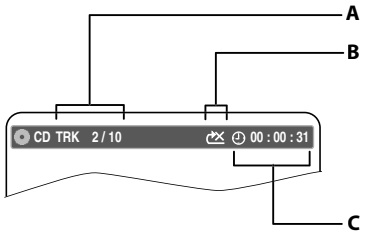
D: Currently Selected Language / Total Languages
E: Current Audio
F: Currently Selected Subtitle / Total Subtitles
G: Currently Selected Angle / Total Angles

3 DISPLAY



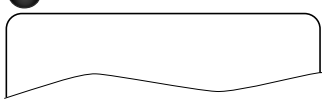
CD

1 DISPLAY



A: Current Track Number / Total Tracks
B: Current Repeat Mode
Off ;
Track Repeat ;
Repeat All ;
C: Elapsed Time of the Current Time

2 DISPLAY

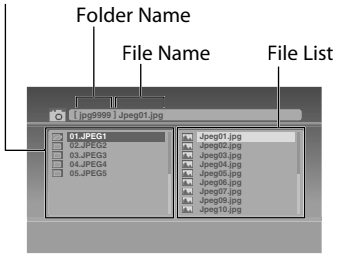


Note: *• The current disc information will automatically appear on the TV screen when a CD disc is inserted.*

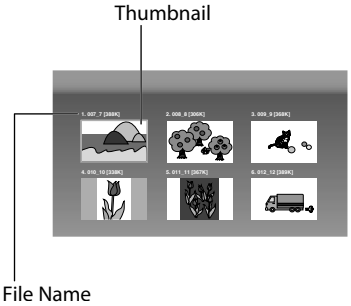
JPEG

Insert a JPEG formatted disc, then the Folder/File List will automatically appear on the TV screen.

Folder List
(Thumbnail will be displayed when a file is highlighted inside a folder)



Press **[DISC MENU]** to display the Thumbnail screen while an available file is highlighted.



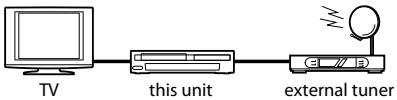
Press **[SKIP ⏮]** or **[SKIP ⏭]** to switch between pages.
Press **[RETURN ↩]** to go back to the File List.

BASIC RECORDING

Before: Turn on the TV.

This unit has no tuner system so it cannot receive TV broadcasts without external tuner or such devices.

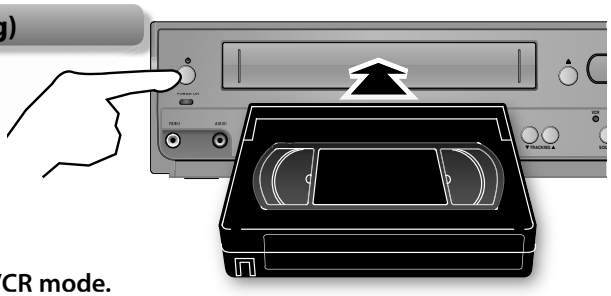
Note:
- *You can also set the external tuner for timer recording. Refer to "Satellite Link" on page 22.*
- *You* **CANNOT** *dub a DVD to a video cassette tape.*
- *Do not change the external tuner's channel while you are recording. You CANNOT watch one channel and record another at the same time.*



Recording & OTR (One-touch Timer Recording)

1 **Press ⏻ to turn on the unit. Then insert a recordable tape.**

Para encender la unidad, pulse ⏻. Luego inserte una cinta grabable.



2 **Press VCR to switch to the VCR mode.**

Para cambiar al modo de VCR, pulse VCR.

REMEMBER
- You need to press VCR first every time you operate any of VCR features.

3 **Press INPUT until "L1" or "L2" is displayed on the TV screen. Select "L1" to activate rear input jacks. Select "L2" to activate front input jacks.**

Pulse INPUT hasta que se visualice "L1" o "L2" en la pantalla de la TV. Seleccione "L1" para activar los conectores posteriores de entrada. Seleccione "L2" para activar los conectores frontales de entrada.

- Connect your external tuner to the L1 (rear panel) jacks of the unit. Connect camcorders and other such devices to the L2 (front panel) jacks. Refer to pages 8, 9.

4 **Press SPEED to select the desired tape speed.**

Pulse SPEED para seleccionar la velocidad deseada de la cinta.

SP

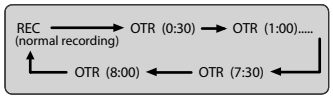
Tape speed / Type of tape	Recording / playback time T60	T120	T160
SP mode	1hour	2hours	2-2/3hours
SLP mode	3hours	6hours	8hours

• LP mode cannot be Recorded, LP mode can be Played back.

5 **Press REC until desired duration recording time is selected.**

REC

Pulse REC hasta que se seleccione el tiempo de duración de grabación deseado.



6 **To stop recording temporarily, press PAUSE.**

Para detener la grabación temporalmente, pulse PAUSE.

- During the recording in the pause mode, 5 ▮ marks appear on the TV screen. Each ▮ mark represents 1 minute.
- Press PAUSE again to resume recording.
- Pause mode will be automatically cancelled after 5 minutes to prevent damage to the cassette tape and the video head.

7 **Press STOP to stop recording.**

Pulse STOP para detener la grabación.

8 **Press OPEN/CLOSE to eject the recorded cassette tape.**

Pulse OPEN/CLOSE para expulsar el casete grabado.

*** Accidental Erasure Prevention**

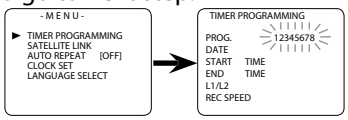
To prevent accidental recording, remove erase-protection tab of the cassette tape. To record again, cover the hole with adhesive tape.

How to set the timer recording or satellite link, refer to pages 21-22.

Timer Recording

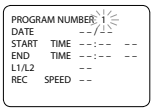
VHS Press VCR first.

1 Press SETUP, Use ▲ / ▼ to select "TIMER PROGRAMMING". Then, press ▶ to go to next step.

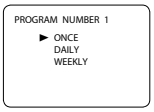


Available program number blinks.

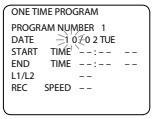
2 Use ▲ / ▼ to select an empty program number. Then, press ▶ to go to next step.



3 Use ▲ / ▼ to select "ONCE", "DAILY" (Mon-Fri), or "WEEKLY". Then, press ▶ to go to next step.

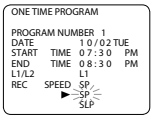


4 Use ▲ / ▼ to select the desired month. Then, press ▶ to go to the next step.



Then, repeat procedures above to select the day, start time, end time, and "L1" or "L2" as well.

5 Use ▲ / ▼ to select recording speed. Then, press CLEAR to remove the MENU.



To set another program after step **5**, press ▶. Then, repeat procedures from steps **2** through **5**.

You can program the unit to record up to 8 programs, and up to 1 year in advance.

6 Press TIMER SET to set the timer standby mode.

The **[TIMER REC] indicator** on this unit lights up and the unit goes to the DVD mode.

Note:
- *To go back one step, press* **[◀]** *during steps* **3** *to* **5**.
- *Select "L1" or "L2" to activate rear input jacks or front input jacks accordingly.*

To Check, Correct or Cancel a Timer Program

1) Press **[TIMER SET]**, and then press **[VCR]** on the remote control.
2) Repeat procedures in step 1 above.
3) Use **[▲ / ▼]** to select the program number you want to check. The details of the program you select will appear on the TV screen.
   Use **[◀ / ▶]** to go to the digit you want to change. Then, use **[▲ / ▼]** to enter the correct numbers.
   You can cancel the entire program by pressing **[◀]** while the program number blinks.
4) Press **[CLEAR]** to exit.
5) Press **[TIMER SET]** to return to the timer standby mode.

To Cancel a Timer Recording in Progress

Press **[■ ⏏]** on the unit.

Note for Timer Recording & OTR

- If a power failure occurs or the cassette tape does not have the erase-protection tab, the **[TIMER REC] indicator** blinks and timer recording cannot be performed.
- If there is a power failure occurred or the unit is unplugged for more than 30 seconds, clock setting and all programmed timer recordings will be lost.
- If a cassette tape runs out before an OTR or a timer recording is finished, the unit ejects the cassette tape.

After an OTR or a Timer Recording Has Been Set, This Unit Operates as Follows:

- Press **[TIMER SET]** on the remote control or **[■ ⏏]** on the unit, then press **[VCR]** to activate the VCR function again.
- To cancel the timer standby mode, press **[TIMER SET]** on the remote control or **[■ ⏏]** on the unit, then press **[VCR]** to activate the VCR function again.

When an OTR or a Timer Recording is Completed.

- If timer programs are left on the VCR, the unit will switch to the DVD mode and then the VCR will go standby for the next timer recording. (All the VCR functions will be unavailable.) If auto power off has been in effect, however, both DVD and VCR will go to standby mode.
- All the DVD functions are available while the VCR is in OTR, Timer standby, or Timer Recording mode.
- The **[TIMER REC] indicator** blinks if there are no more timer programs.
- Press **[■ ⏏]** on this unit or **[TIMER SET]** on the remote control to use the VCR when the unit is turned off.

To Use the DVD Player During Timer Recording or While the [TIMER REC] Indicator is On or Blinking.

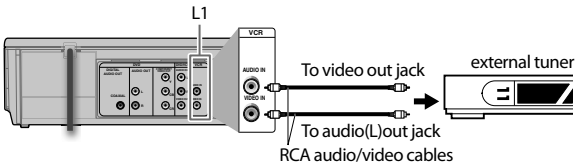
- Press **[POWER]** to turn On the unit. Press **[DVD]** on the Remote Control to choose DVD mode. Then continue with the other DVD features as described in this manual.

Satellite Link

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

Preparing for the Satellite Link:

- Only L1 (rear) is available for satellite link and be sure that this L1 needs to be connected by the external tuner.
- The external tuner should be equipped with some kind of timer function. Using timer function of the tuner, set it to the output audio/video signals when it comes to the time you want to start recording, and stop those signals when it comes to the time you want to finish recording. Refer to the tuner's manual on how to set the timer.

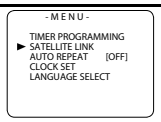


VHS Press VCR first.

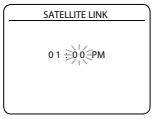
1 Press SPEED to select the desired tape speed.

2 In the stop mode, press SETUP.

3 Use ▲ / ▼ to select "SATELLITE LINK". Then, press ▶ to go to the next step.



4 Use ▲ / ▼ to select the desired hour. Then, press ▶ to go to the next step.

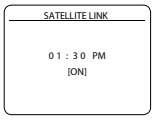


Then, repeat procedures above to select the minute as well.

The hour can be selected from 1-12 with AM or PM.

When the external tuner signal is stopped, recording will be stopped.

5 Press ▶ to set satellite link standby mode.



[TIMER REC] indicator: lights up and the unit goes to the DVD mode. If you do not use DVD function, turn OFF the unit.

An external tuner must be turned ON for satellite link to start. If external tuner is not set to output signals, satellite link will remain in standby mode.

To Cancel the Satellite Link on Standby:

Press **[TIMER SET]** on the remote control or **[■ ⏏]** on this unit.

To Cancel the Satellite Link in Progress:

Press **[■ ⏏]** on this unit.

Note:

- *Recording picture will be distorted if the copy protection signal is being detected during satellite link.*
- *When the timer recording and the satellite link are overlapped, those recordings are recorded as illustrated below.*

e.g.) In case of the satellite link is overlapped on the existing timer recording.

timer recording	
satellite link	
recording result	

e.g.) In case of the timer recording is programmed in the middle of the satellite link.

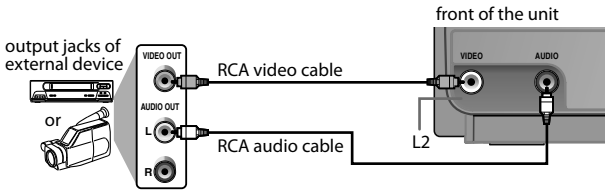
timer recording	
satellite link	
recording result	

e.g.) In case of the timer recording is overlapped on the existing satellite link.

timer recording	
satellite link	
recording result	

Dubbing a Cassette Tape

Warning: Unauthorized recordings of copyrighted cassette tapes may be an infringement of copyright laws.



You can use a video disc player, cable/satellite box or other devices with Audio/Video output jacks.

VHS Press VCR first.

1) Press **[SPEED]** on the remote control to select recording speed (SP or SLP).
2) Press **[INPUT]** on the remote control to select L1 or L2 whichever Jack the external device is connected to.
3) Press **[REC]** on the unit, and then start playback of the external device.
4) To stop recording, press **[■ ⏏]** on this unit.
5) Stop playback of the external device.

Note:

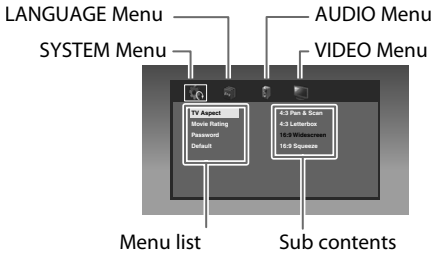
- *For best results during dubbing, use buttons on this unit whenever possible. The remote control might affect another device's operation.*

OPTIONAL SETTINGS

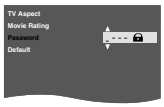
Changing the DVD Settings (in the setup menu)

In the setup menu, you can customize the various kinds of settings as you prefer.
Refer to the following instructions to navigate through the setup menus.

1 **Press [SETUP].**
2 **Use [◀ / ▶] to select a setup item.**
3 **Press [▼] to access the highlighted item.**
4 **Use [▲/ ▼] to go up or down in the menu list.**
5 **Press [ENTER] to access the sub contents.**
6 **Use [▲/ ▼] to select a setting.**
7 **Press [ENTER] to enter.**
8 **Press [SETUP] to exit.**



- The following table is the contents which you can set and the default settings. Refer to the table for useful operation.
- Your change to each setting stays activated even when the unit is turned off.

Setup menu (highlight is the default)			Contents	Notes
SYSTEM	TV Aspect	4:3 Pan & Scan 4:3 Letterbox 16:9 Widescreen 16:9 Squeeze	Sets the aspect ratio of the playback image to fit your TV. See the note on the right.	• Select "4:3 Pan & Scan" for a full height picture with both sides adjusted. • Select "4:3 Letterbox", black bars may appear on the top and bottom of the TV screen. • Select "16:9 Widescreen" if a wide-screen TV is connected to this unit. • Select "16:9 Squeeze" to display 4:3 aspect ratio in the center of the 16:9 screen when playing back 4:3 images.
	Movie Rating	1 [ALL] 2 [NR] 3 [G] 4 [PG] 5 [PG-13] 6 [R] 7 [NC-17] 8 [X-Adult]	Sets the rating level for the disc playback. Rating settings allows you to set the rating levels of your DVD. Playback will stop if the ratings exceed the levels you set.	• The rating level can be changed when a password has not been set yet for the first time use. • If you have set a password already, "Movie Rating" cannot be selected.
	Password		Sets the password for "Movie Rating" and "Default" settings. **– For the first time use.** Enter any 4-digit number(except for 4737). • Press cursor **[▲]** or **[▼]** to change the number, then press cursor **[▶]**. • Press **[◀]** to erase if you input the incorrect number. • When 4-digit numbers are entered, press **[ENTER]**. **– A password has been set already.** (is displayed.)  Enter your 4-digit password. • Press cursor **[▲]** or **[▼]** to change the number, then press cursor **[▶]**. • Press cursor **[◀]** to erase if you input the incorrect number. • When 4-digit numbers are entered, press **[ENTER]**.	• If you forget the password, enter "4737" at step *6*, then enter your new password. • Playback will stop if the ratings exceed the levels you set, it will require you to enter a password before the disc will play back. • This function is available only when is displayed.
	Default	Restore	Reset to default setting.	• "Default" is not selected if you have set a password already. • When you do not wish to initialize, press **[SETUP]** to exit the menu at step *7*.

LANGUAGE	Menu	English Français Español	Sets the Language for the On-screen Display.	
	Audio	English French Spanish	Sets the Audio Language.	• Language options are not available with some discs. • Only the Languages supported by the disc can be selected. • "LANGUAGE" setting for "Audio" are not available with some discs. If Multiple Languages are available on disc, then select **[AUDIO]** to select the desired Language.
	Subtitle	Off English French Spanish	Sets the Subtitle Language.	• Language options are not available with some discs. • Only the Languages supported by the disc can be selected. • "LANGUAGE" setting for "Subtitle" are not available with some discs. If Multiple Languages are available on disc, then select **[SUBTITLE]** to select the desired Language.
	DVD Menu	English French Spanish	Sets the Language in DVD Menu.	• Language options are not available with some discs. • Only the Languages supported by the disc can be selected.
AUDIO	Audio Out	Bitstreem PCM	Set to "Bitstream" when the unit is connected to a Dolby Digital decoder. – Bitstream: outputs a Dolby Digital signals. – PCM: convert the Dolby Digital into PCM (2 channel).	– Bitstream: Connecting to a Dolby Digital decoder for Dolby Digital Audio output. – PCM: Connecting to another device (an MD deck or DAT deck etc.) without a Dolby Digital Decoder. Convert the Dolby Digital into LPCM (2 channel). • This unit does not support DTS audio. This is not a malfunction. You need to set this unit to "Bitstream" in the "Audio Out" Menu and also need to Connect to a TV or Amplifier that supports DTS, then the audio will be output as DTS. It is only available when connected via the Coaxial jack.
	Dynamic Range	8 6 4 2 0	Adjusts for Clarity even when the Volume is Low, by Compressing the Range of the lowest sound level and the highest sound level.	

VIDEO	Set Brightness	12 10 8 6 4 2 0	Adjusts the Brightness.	• The Settings will remain effective even if the unit is switched into the Standby mode. • The effect of Picture Adjustment may differ depending on the connected TV.
	Set Contrast	12 10 8 6 4 2 0	Adjusts the Contrast.	
	Set Color	12 10 8 6 4 2 0	Adjusts the Color Saturation.	
	Set Tint	+6 +4 +2 0 -2 -4 -6	Adjusts the Color Tone.	
	Set Sharpness	8 6 4 2 0	Adjusts the Sharpness.	

Troubleshooting Guide

If this unit does not perform properly when operated as instructed in this manual. Refer to the following:

	Symptom	Remedy
DVD • VCR	No power.	• Make sure the power plug is connected to an AC outlet. • Make sure the power is turned on.
	This unit does not respond to the remote control.	• Check if the power plug is connected to an AC outlet. • You have to be within 23 feet (7m) of this unit. • Check if a cassette tape or disc is in this unit. • Make sure nothing is blocking the unit's IR receiver window. • Inspect and/or replace the batteries in the remote control. • Check if the Remote Control is sending out an IR signal, refer to page 27.
	Poor picture or noise.	• Interference signal may be received. Change the position and direction of the unit.
	Cannot remove the cassette tape or disc.	• Check if this unit is in the DVD or VCR mode. If not, press **[DVD]** or **[VCR]** on the remote control to switch the mode. • Turn Power Off. Turn Power back On and immediately press the DVD or VCR Eject Button repeatedly to Eject the Disc or Cassette .
VCR	Cannot record a TV program.	• This unit does not have a tuner to receive TV broadcasting. • You must connect this unit to TV with audio/video output jacks or an external tuner to record TV programs. Refer to "Recording & OTR (One -touch Timer Recording)" on page 20 and "Satellite Link" on page 22.
	Timer recording is impossible.	• Make sure the timer program is set correctly. • Make sure **[TIMER REC] indicator** on this unit lights up. If not, press **[TIMER SET]**. • Make sure the VCR clock is set correctly.
	Cannot go into record mode.	• Make sure the cassette tape has a record tab. If needed, cover the hole with tape. • Activate this unit in VCR mode. Press **[VCR ∞]** on the remote control so that the **[VCR] indicator** will illuminate.
	Playback picture is partially noisy.	• Adjust tracking control for a better picture by pressing **[TRACKING ▲ / ▼]**.
	Cannot view a picture but the audio is OK.	• Head cleaning may be necessary. Refer to "Auto Head Cleaning" (page 27).
	No or poor, playback picture.	• Adjust tracking control for a better picture by pressing **[TRACKING ▲ / ▼]**. • Connect the video cable firmly.
	Video or color fades in and out when making a copy of a cassette tape.	• You cannot copy a copyrighted cassette tape.
	No picture and sound.	• Please confirm to connect to DVD / VCR AUDIO OUT and DVD / VCR VIDEO OUT.
DVD	No picture.	• Connect the video cable firmly. • Insert a correct video disc that can be played back on this unit. • Press **[DVD ◎]** on the remote control. Check if the **[DVD] indicator** will illuminate. Then try other DVD features.
	Disc cannot be played back.	• Insert the disc. • Clean the disc. • Place the disc correctly with the label side up. • Change the movie rating, refer to page 23. • Handle a disc with special care so that it does not have fingerprints, scratches, or dusts on its surface.
	No sound.	• Connect the audio cables firmly. • Turn on the power of the audio component. • Correct the audio output settings. • Correct the input settings on the audio component. • Turn up Sound on TV or remove Mute function from the TV.
	No DTS audio is output.	• This unit does not support DTS audio. • You need to set this unit to "Bitstream" in "Audio Out" Menu and also need to connect to the TV or amplifier that supports DTS, then the audio will be output as DTS. It is only available when connected via coaxial jack.
	Distorted picture.	• Connect this unit directly to the TV. • There are some cases where pictures may be slightly distorted, and those are not a sign of a malfunction. • Although pictures may stop for a moment, this is not a malfunction.
	Audio or subtitle language does not match the setting.	• The selected language is not available for audio or subtitles on the DVD.
	The camera angle cannot be changed.	• The DVD does not always contain sequences recorded from different camera angles.
	Audio or subtitle language cannot be changed.	• The DVD does not always contain audio source or subtitles in the selected language. • The DVD Audio or subtitle language may only be changed using the disc Menu.
	"INVALID ENTRY" appears on the TV screen, prohibiting an operation.	• The operation is prohibited by this unit or the disc.

- Some functions are not available in specific modes, but this is not a malfunction. Read the description in this manual for details on correct operations.
- Some functions are prohibited on some discs.

Maintenance

Servicing

- Please refer to relevant topics on the "Troubleshooting Guide" on page 26 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 toll free customer support line found on the cover of this manual to locate an authorized service center.

Cleaning the Cabinet

- Wipe the front panel and other exterior surfaces of the unit with a soft cloth.
- Never use a solvent, thinner, benzene or alcohol to clean the unit. Do not spray insecticide liquid near the unit. Such chemicals may discolor the surface or damage the unit.

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 continues to perform improperly even after you have referred to the relevant sections and to the "Troubleshooting Guide" in this 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

- When you handle a disc, hold it by its edge and try not to touch the surface of the disc.
- Always store the disc in its protective case when not in use.
- Do not glue paper or put stickers onto the disc. This may damage the disc, and the unit may not read it correctly.

Auto Head Cleaning

- Automatically cleans video heads as you insert or remove a cassette tape, so you can see a clear picture.
- If the playback picture is blurred or interrupted while the TV broadcast is showing clear, the dirt may have accumulated on the video heads, or the usage of rental or worn cassette tapes can cause this problem. If a streaky or snowy picture appears during playback, the video heads in your unit may need to be cleaned.
  1. Please visit your local audio/video store and purchase a good quality VHS video head cleaner.
  2. If a Video head cleaner does not solve the problem, please call our toll free customer support line found on the cover of this manual to locate an authorized service center.

Note:
- *Remember to read the instructions along with the video head cleaner before use.*
- *Clean video heads only when problems occur.*

IR Signal Check

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

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.

Specifications

Output signal format:	NTSC color
Video heads:	Rotary four-head
Tape width:	1/2 inch (12.65 mm)
Tape speeds:	**SP:** 1-5/16 inch/sec. (33.40 mm/sec.)
	LP: 16.67 mm/sec.
	SLP: 7/16 inch/sec. (11.12 mm/sec.)
Disc media size:	5 inches (12 cm) / 3 inches (8 cm)
Terminals:	
Component video output:	RCA jack x 3
	Y: 1 Vp-p (75 Ω)
	Pb: 700 mVp-p (75 Ω)
	Pr: 700 mVp-p (75 Ω)
Video output:	RCA jack x 1 1 Vp-p (75 Ω)
Coaxial digital audio output:	RCA jack x 1 500 mVp-p (75 Ω)
Audio output:	RCA jack x 4 2 V rms
Video input:	RCA jack x 2 1 Vp-p (75 Ω)
Audio input:	RCA jack x 2 2 V rms

Remote control:	Digital encoded infrared light system
Operating temperature:	41 °F (5 °C) to 104 °F (40 °C)
Power requirements:	120 V AC +/- 10 %, 60 Hz +/- 0.5 %
Power consumption (maximum):	
	16 W **(standby:** 2.8 W)
Dimensions:	**W:** 17 3/16" (435 mm)
	H: 3 3/4" (94 mm)
	D: 9 3/16" (233 mm)
Weight:	Approx. 5.63 lbs (2.55 kg)

- Designs and specifications are subject to change without notice.
- If there is a discrepancy between languages, the default language will be English.

LIMITED WARRANTY
NINETY (90) DAY LABOR / ONE (1) YEAR PARTS

WARRANTY COVERAGE:
This warranty obligation is limited to the terms as set forth below.

WHO IS COVERED:
This product warranty is issued to the original purchaser or the person receiving the product as a gift against defects in materials and workmanship as based on the date of original purchase ("Warranty Period") from an Authorized Dealer. The original sales receipt showing the product name and the purchase date from an authorized retailer is considered such proof.

WHAT IS COVERED:
This warranty covers new products if a defect in material or workmanship occurs and a valid claim is received within the Warranty Period. At its option, the company will either (1) repair the product at no charge, using new or refurbished replacement parts, or (2) exchange the product with a product that is new or which has been manufactured from new, or serviceable used parts and is at least functionally equivalent or most comparable to the original product in current inventory, or (3) refund the original purchase price of the product.
Replacement products or parts provided under this warranty are covered against defects in materials and workmanship from the date of the replacement or repair for ninety (90) days or for the remaining portion of the original product's warranty, whichever provides longer coverage for you. When a product or part is exchanged, any replacement item becomes your property and the replaced item becomes company property. When a refund is given, your product becomes company property.
Note: Any product sold and identified as refurbished or renewed carries a ninety (90) day limited warranty.

Replacement product can only be sent if all warranty requirements are met. Failure to follow all requirements can result in delay.

WHAT IS NOT COVERED - EXCLUSIONS AND LIMITATIONS:
This Limited Warranty applies only to new company manufactured products that can be identified by the trademark, trade name, or logo affixed to it. This Limited Warranty does not apply to any hardware product or any software, even if packaged or sold with the product, as manufacturers, suppliers, or publishers may provide a separate warranty for their own products packaged with the bundled product.

The company is not liable for any damage to or loss of any programs, data, or other information stored on any media contained within the product, or other additional product or part not covered by this warranty. Recovery or reinstallation of programs, data or other information is not covered under this Limited Warranty.

This warranty does not apply (a) to damage caused by accident, abuse, misuse, neglect, misapplication, or non-supplied product, (b) to damage caused by service performed by anyone other than company approved Authorized Service Location, (c) to a product or a part that has been modified without written company permission, or (d) if any serial number has been removed or defaced, or (e) product, accessories or consumables sold "AS IS" without warranty of any kind by including refurbished product sold "AS IS" by some retailers.

This Limited Warranty does not cover:
- Shipping charges to return defective product.
- Labor charges for installation or setup of the product, adjustment of customer controls on the product, and installation or repair of antenna/signal source systems outside of the product.
- Product repair and/or part replacement because of improper installation or maintenance, connections to improper voltage supply, power line surge, lightning damage, retained images or screen markings resulting from viewing fixed stationary content for extended periods, product cosmetic appearance items due to normal wear and tear, unauthorized repair or other cause not within the control of the company.
- Damage or claims for products not being available for use, or for lost data or lost software.
- Damage from mishandled shipments or transit accidents when returning product.
- A product that requires modification or adaptation to enable it to operate in any country other than the country for which it was designed, manufactured, approved and/or authorized, or repair of products damaged by these modifications.
- A product used for commercial or institutional purposes (including but not limited to rental purposes).
- Product lost in shipment and no signature verification receipt can be provided.
- Failure to operate per Owner's Manual.

TO OBTAIN ASSISTANCE…
Contact the Customer Care Center at:
1 877 393 8624

REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY FOR THE CONSUMER, WITH THE ISSUING COMPANY NOT LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY ON THIS PRODUCT. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY.

Some states do not allow the exclusions or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you.

This warranty gives you specific legal rights. You may have other rights which vary from state/province to state/province.

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