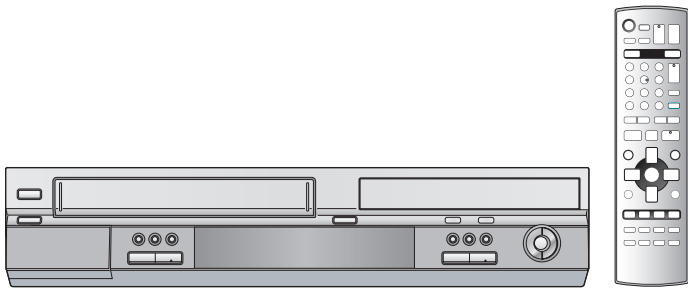


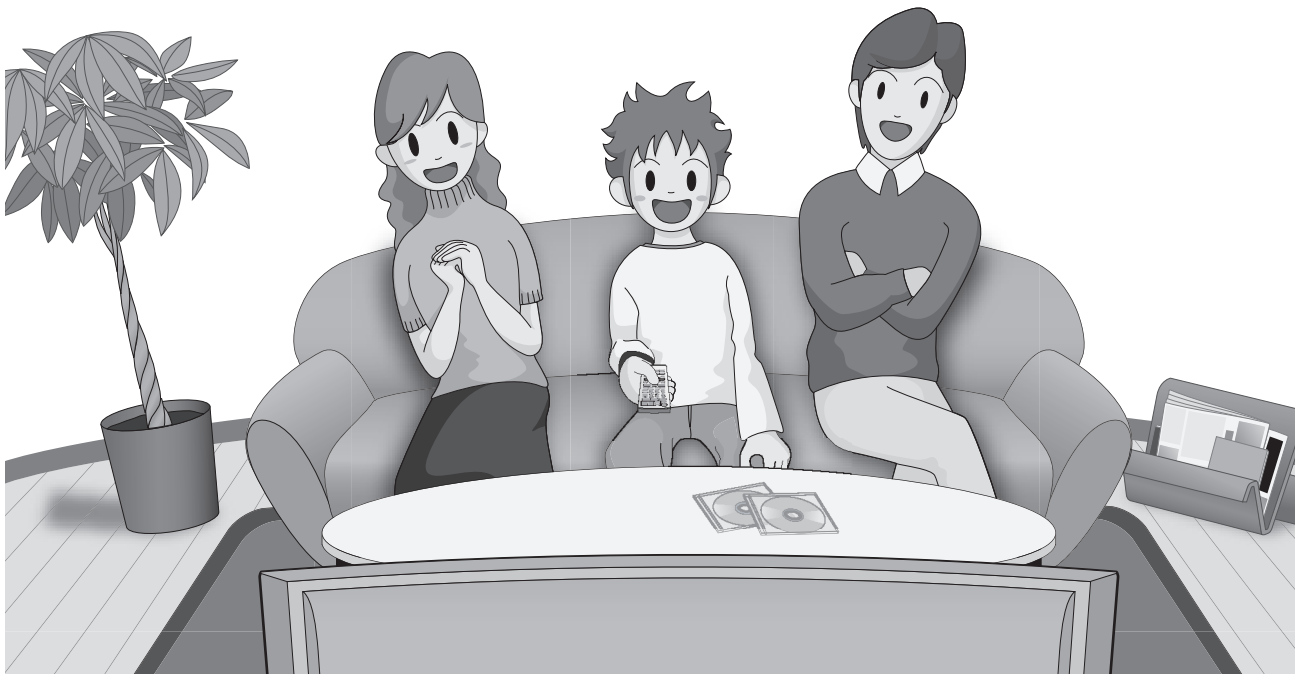
Panasonic®



Operating Instructions

DVD Recorder Model No. **DMR-ES30V**

DIGA



Dear Customer

Thank you for purchasing this product. For optimum performance and safety, please read these instructions carefully.

Before connecting, operating or adjusting this product, please read the instructions completely.
Please keep this manual for future reference.

If you have any questions contact

In the U.S.A: 1-800-211-PANA(7262)
In Canada: 1-800-561-5505

For U.S.A. only
The warranty can be found on page 73.

For Canada only
The warranty can be found on page 74.

La guía rápida en español se encuentra en la página 77-83.

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Warning and Important Information

CAUTION!

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

WARNING:

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

CAUTION!

DO NOT INSTALL OR PLACE THIS UNIT IN A BOOKCASE,
BUILT-IN CABINET OR IN ANOTHER CONFINED SPACE.
ENSURE THE UNIT IS WELL VENTILATED. TO PREVENT
RISK OF ELECTRIC SHOCK OR FIRE HAZARD DUE TO
OVERHEATING, ENSURE THAT CURTAINS AND ANY OTHER
MATERIALS DO NOT OBSTRUCT THE VENTILATION VENTS.



CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC
SHOCK, DO NOT REMOVE SCREWS.
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 FOLLOWING APPLIES ONLY IN THE U.S.A.

Note to CATV system installer:

This reminder is provided to call the CATV system installer's
attention to Article 820-40 of the NEC that provides guidelines for
proper grounding and, in particular, specifies that the cable
ground shall be connected to the grounding system of the
building, as close to the point of cable entry as practical.

The socket outlet shall be installed near the equipment and easily
accessible or the mains plug or an appliance coupler shall remain
readily operable.

THE FOLLOWING APPLIES ONLY IN THE U.S.A.

FCC Note:

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:

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

FCC Caution: To assure continued compliance, follow the
attached installation instructions and use only shielded interface
cables when connecting to peripheral devices.

Any changes or modifications not expressly approved by the
party responsible for compliance could void the user's authority to
operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is
subject to the following two conditions: (1) This device may not
cause harmful interference, and (2) this device must accept any
interference received, including interference that may cause
undesired operation.

Responsible Party:

Panasonic Corporation of North America
One Panasonic Way
Secaucus, NJ, 07094 USA
Telephone No.: 1-800-211-7262

DANGER	• VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM. (FDA 21 CFR)
CAUTION	• VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM. (IEC60825-1)
ATTENTION	• RAYONNEMENT LASER VISIBLE ET INVISIBLE EN CAS D'OUVREMENT. EXPOSITION DANGEREUSE AU FAISCEAU.
ADVARSEL	• SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDSETTELSE FOR STRÅLING.
VARO!	• AVATTAESSA OLET ALTTIINA NÄKYVÄÄ JA NÄKYMÄTÖN LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING	• SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. BETRakta EJ STRÅLEN.
ADVARSEL	• SYNLIG OG USYNLIG LASERSTRÅLING NÄR DEKSEL ÅPNEES. UNNGÅ EKSPONERING FOR STRÅLEN.
VORSICHT	• SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG. WENN ABDECKUNG GEÖFFNET, NICHT DEM STRAHL AUSSETZEN.
注意	• 打开时有可见及不可见激光辐射。避免激光束照射。
注意	• ここを開くと可視及び不可視のレーザー光が出ます。 ビームを直接見たり、触れたりしないでください。 RQLS0233

(Inside of product)

Getting started

IMPORTANT SAFETY INSTRUCTIONS

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

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



Precautions for installation

Do not place the unit on amplifiers or equipment that may become hot.

The heat can damage the unit.



Before moving the unit, ensure the disc tray is empty. Failure to do so will risk severely damaging the disc and the unit.

■ Cautions as to condensation

Condensation can cause unreliable playback of VHS recordings. Condensation may form in the following cases,

- The unit is brought from cold surroundings into a well-heated room.
- The unit is suddenly brought from cool surroundings, such as an air-conditioned room or car, to a place which is hot and humid.
- During the rainy season.

In any of the above-mentioned conditions, do not operate the unit for at least 2 hours. The unit is not equipped with a dew sensor.

■ Other precautions for installation

- The unit should not be installed or operated near large magnets or electromagnetic devices. Such devices can damage pre-recorded VHS recordings.
- Do not place any heavy objects atop the unit, and do not install it in a confined space. Please allow for adequate air circulation.
- The unit should not be mounted in a vertical position. It's designed to operate in the horizontal position.

About descriptions in these operating instructions

- Pages to be referred to are indicated as (→ ○○).
- The explanations concerning discs are indicated by [DVD], and those concerning video are indicated by [VHS].

Useful features

You can enjoy both DVD and VHS with the unit.

This DVD Recorder can record images and sounds in high quality to rapid random access capable DVD media. This has resulted in many new features that outperform older tape formats. The following information summarizes a few of these features.

■ DVD

Progressive output (→ 15, 19)

If you connect the unit with a progressive output-compatible TV, you can enjoy higher-quality and less-flicker images than conventional TVs (of the interlace output type) can present.

Finalize (→ 31)

This function enables you to play recorded DVD-R, DVD-RW (DVD-Video format) and +R on other players.

Instant play (→ 33)

This function can quickly find and play a video program you wish to watch. Direct Navigator guides you to the beginning of a previously recorded video immediately.

Quick view (→ 21)

This function allows you to watch news, information and other programs in a short time.

Chasing play (→ 27)

There is no need to wait until recording is complete. Without stopping recording, you can play the video currently being recorded from its beginning.

Instant recording (→ 25)

You no longer need to search for empty disc space. By pressing the recording button, the unit finds available recording space and begins recording right away.

Simultaneous recording and play (→ 27)

With this function, you can play a previously recorded video program while recording another program.

Time slip (→ 22, 27)

This function enables you to jump to the scene you specify during play and also while recording.

One touch transfer (dub) (→ 57, 59)

This function can copy video from VHS to DVD and vice versa.

■ VHS

Long recording (→ 51)

With this function, you can record approx. 10 hours of video onto a T-120 cassette, for example.

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Concerning discs

■ Discs you can use for recording and play [12 cm (5")/8 cm (3")]

Disc type	DVD-RAM ● 4.7 GB/9.4 GB, 12 cm (5") ● 2.8 GB, 8 cm (3")	DVD-R (DVD-Video format) ● 4.7 GB, 12 cm (5") ● 1.4 GB, 8 cm (3")	DVD-RW (DVD-Video format) ● 4.7 GB, 12 cm (5") ● 1.4 GB, 8 cm (3")	+R ● 4.7 GB, 12 cm (5")
Logo				—
Indicated in these instructions with	RAM	-R before finalization DVD-V after finalization	-RW(V) before finalization DVD-V after finalization	+R before finalization DVD-V after finalization
Main use	Re-writable discs	One time recording discs (recordable until the disc is full)	Re-writable discs	One time recording discs (recordable until the disc is full)
Maximum recording time	Approx. 8 hours (Approx. 16 hours on a double-sided disc*)	Approx. 8 hours	Approx. 8 hours	Approx. 8 hours
Play on other player	Only on DVD-RAM compatible players. It is not necessary to finalize the disc. (→ 64)	Only after finalizing the disc. (→ 31, 64)	Only after finalizing the disc. (→ 31, 64)	Only after finalizing the disc. (→ 31, 64)
What you can do on this unit (✓: Possible, ✕: Impossible)				
Chasing playback	✓	✕	✕	✕
Recording broadcasts that allow one copy	✓ (CPRM (→ 64) compatible discs only)	✕	✕	✕
Recording both Main and SAP of MTS broadcast	✓	✕ Only one is recorded. (→ 44, Select MTS)	✕ Only one is recorded. (→ 44, Select MTS)	✕ Only one is recorded. (→ 44, Select MTS)
Recording 16:9 aspect picture	✓	✕ (The picture is recorded in 4:3 aspect.)	✕ (The picture is recorded in 4:3 aspect.)	✕ (The picture is recorded in 4:3 aspect.)
Entering text	✓	✓	✓	✓
Erasing titles	✓	✓ (Available space does not increase after erasing.)	✓ (Disc space increases only when the last recorded title is erased.)	✓ (Available space does not increase after erasing.)
Creating playlists	✓	✕	✕	✕

* You cannot consecutively record or play both sides.

- We recommend using Panasonic discs. We recommend using DVD-RAM discs with cartridges to protect them from scratches and dirt.
- Discs from other manufactures may not be recorded or played due to the condition of the recording.
- You may not be able to record to DVD-R, DVD-RW and +R discs on this unit or play them due to the condition of the recording.
- You cannot record programs that allow "One time only recording" to CPRM compatible DVD-R and DVD-RW on this unit. You can record other programs as DVD-Video format.
- You can use high speed recording compatible discs on this unit.

■ DVD Video Recording format

This is a recording method which allows you to record and edit TV broadcasts and so on.

- Digital broadcasts that allow "One time only recording" can be recorded to a CPRM compatible disc. You can record to CPRM compatible DVD-RAM on this unit.
- Play is only possible on a compatible DVD player.

Use a DVD-RAM to record in DVD Video Recording format.

■ DVD-Video format

This recording method is the same as commercially available DVD-Video.

- Digital broadcasts that allow "One time only recording" cannot be recorded.
- These can be played on a DVD player. However programs recorded on this unit must be finalized to be played on other DVD players.

Use a DVD-R or DVD-RW to record in DVD-Video format.

Getting started

■ Play-only discs [12 cm (5")/8 cm (3")]

Disc type	DVD-Video	DVD-Audio	DVD-RW (DVD Video Recording format)	+RW	Audio CD		Video CD
Logo				—		—	
Indicated in these instructions with	DVD-V	DVD-A	-RW(VR)	DVD-V	CD		VCD
Instructions	High quality movie and music discs	High fidelity music discs • Played on this unit in 2 channels	DVD-RW* recorded on another DVD recorder • You can play programs that allow "One time only recording" if they have been recorded to a CPRM compatible disc. • By formatting (→ 31) the disc, you can record to it in DVD-Video format and play it on the unit. It may be necessary to finalize the disc on the equipment used for recording.	+RW* recorded on another DVD recorder	Recorded audio and music (including CD-R/ RW*)	CD-R* and CD-RW* with music recorded in MP3 (→ 23) Still pictures (JPEG and TIFF) recorded on CD-R/RW*	Recorded music and video (including CD-R/ RW*)

* Play may be impossible on some DVD-RW (DVD Video Recording format), +RW, CD-R or CD-RW discs due to the condition of the recording.

- You can play still pictures (JPEG/TIFF), CD-DA, Video CD and MP3 format data recorded on CD-R/RW. Close the session or finalize the disc after recording.
- The producer of the disc can control how discs are played. So you may not always be able to control play as described in these operating instructions. Read the disc's instructions carefully.

Note about using a DualDisc

The digital audio content side of a DualDisc does not meet the technical specifications of the Compact Disc Digital Audio (CD-DA) format so play may not be possible.

Regarding DVD-Audio

Some multi-channel DVD-Audio will prevent down-mixing (→ 64) of all or part of their contents if this is the manufacturer's intention. Tracks that are prevented from being down-mixed will not play properly on this unit (e.g. audio is played from the front two channels only). Refer to the disc's jacket for more information.

Region number supported by this unit

Region numbers are allocated to DVD players and DVD-Video according to where they are sold.

- The region number of this unit is "1".
- The unit will play DVDs marked with labels containing "1" or "ALL".

Example:



■ Discs that cannot be played

- 2.6/5.2 GB DVD-RAM, 12 cm (5")
- 3.95/4.7 GB DVD-R for Authoring
- DVD-R recorded in DVD Video Recording format
- DVD-R (DVD-Video format), DVD-RW (DVD-Video format), +R recorded on another unit and not finalized (→ 64, Finalize)
- PAL discs (you can still play the audio on DVD-Audio)
- DVD-Video with a region number other than "1" or "ALL"
- Blu-ray
- DVD-ROM, DVD-R DL, +R DL, +R 8cm (3"), CD-ROM, CDV, CD-G, Photo CD, CVD, SVCD, SACD, MV-Disc, PD, DivX Video Disc, etc.

■ Concerning logo marks

	Dolby Digital (→ 44) This is a method of coding digital signals developed by Dolby Laboratories. Not only stereo (2 channel) audio, these signals can also be multi-channel audio. A large amount of audio information can be recorded on one disc by this method.
	DTS Digital Surround (→ 44) This surround system is used in many movie theaters around the world. The separation between channels is good and the compression ratio is low, so realistic sound effects are possible.

The manufacturer accepts no responsibility and offers no compensation for loss of recorded or edited material due to a problem with the unit or recordable media, and accepts no responsibility and offers no compensation for any subsequent damage caused by such loss.

Examples of causes of such losses are

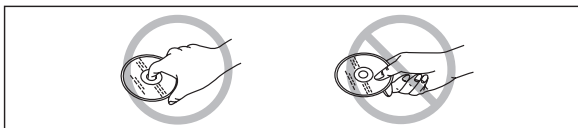
- A disc recorded and edited with this unit is played in a DVD Recorder or computer disc drive manufactured by another company.
- A disc used as described above and then played again in this unit.
- A disc recorded and edited with a DVD Recorder or computer disc drive manufactured by another company is played in this unit.

Getting started

■ Disc handling

■ How to hold a disc

Do not touch the recorded surface.

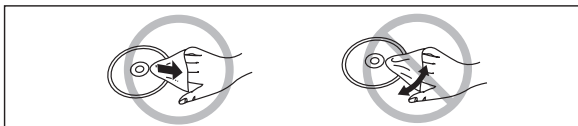


■ Concerning non-cartridge discs

Be careful about scratches and dirt.

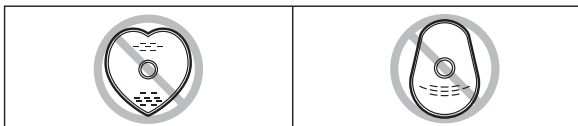
■ If there is dirt or condensation on the disc

Wipe with a damp cloth and then wipe dry.



■ Handling precautions

- Do not attach labels or stickers to discs. (This may cause disc warping and unbalanced rotation, rendering it unusable.)
- Write on the label side of the disc only with a soft, oil-based felt pen. Do not use ballpoint pens or other hard writing implements.
- Do not use record cleaning sprays, benzine, thinner, static electricity prevention liquids or any other solvent.
- Do not use scratch-proof protectors or covers.
- Do not drop, stack, or cause impact to discs. Do not place objects on them.
- Do not use the following discs:
 - Discs with exposed adhesive from removed stickers or labels (rental discs etc.).
 - Discs that are badly warped or cracked.
 - Irregularly shaped discs, such as heart shapes.



- Do not place in the following areas:
 - In direct sunlight.
 - In very dusty or humid areas.
 - Near a heater.
 - Locations susceptible to significant differences in temperature changes (condensation can occur).
 - Where static electricity or electromagnetic waves occur.
- To protect discs from scratches and dirt, return them to their cases or cartridges when you are not using them.

■ Inserting discs

1 Press [▲, OPEN/CLOSE] on the main unit to open the tray.

- You can insert a cartridge or non-cartridge disc.

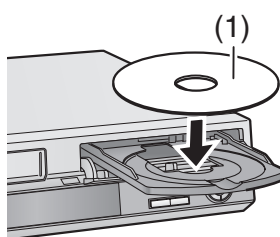
2 Press [▲, OPEN/CLOSE] on the main unit to close the tray.

- If you insert a DVD-RAM with the write-protect tab set to "PROTECT" (→ 30), play starts automatically.

Note

- A double-sided disc should be loaded with the side you want to record/play facing down.
- It is not possible to record continuously from one side of a double-sided disc to the other. You will need to eject the disc and turn it over.
- When using 8 cm (3") DVD-RAM or 8 cm (3") DVD-R, remove the disc from the cartridge.

Non-cartridge disc

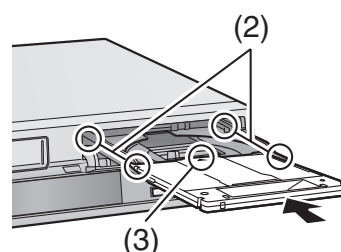


(1) Insert label-up.

(2) Insert fully so it clicks into place.

(3) Insert label-up with the arrow facing in.

Cartridge disc



Maintenance

The precision parts in the unit are readily affected by the environment, especially temperature, humidity, and dust. Cigarette smoke also can cause malfunction or breakdown.

To clean the unit, wipe with a soft, dry cloth.

- Never use alcohol, thinner or benzine to clean the unit.
- Before using chemically treated cloth, carefully read the instructions that came with the cloth.

Observe the following points to ensure continued listening and viewing pleasure.

Dust and dirt may adhere to the unit's lens over time, possibly making it impossible to record or play discs.

Use the **lens cleaner** about once every year, depending on frequency of use and the operating environment.

Carefully read the lens cleaner's instructions before use.

Lens cleaner: LF-K123LCA1 or RP-CL720 (On sale from May 2005)

■ When the unit is not to be used for a long time

To save power, unplug it from the household AC outlet. The unit consumes a small amount of power even when it is turned off.

Standby power consumption

		Front Display (→ 45)	
		Automatic	Bright
Quick Start (→ 43)	On	Approx. 9 W	Approx. 10 W
	Off	Approx. 2 W	Approx. 4 W

■ Quick Start (→ 43)

1 Sec. Quick Start for Recording on DVD-RAM*

* From the power off state, recording on DVD-RAM starts about 1 second after first pressing the [⏻, DVD/VHS POWER] and then sequentially pressing the [●, REC] (Quick Start Mode).

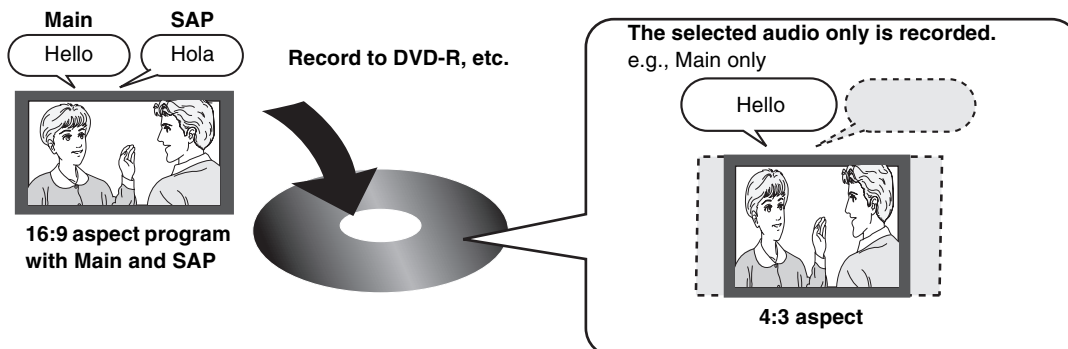
Getting started

Using DVD-R, DVD-RW and +R on this unit

Restrictions with DVD-R, etc.*

- 16:9 aspect programs are recorded in 4:3 aspect.
- Either Main or SAP can be recorded for MTS broadcasts.
- Playing the disc on other DVD players is not possible before finalizing.

* DVD-R, DVD-RW and +R are collectively referred to as "DVD-R, etc." on this page.

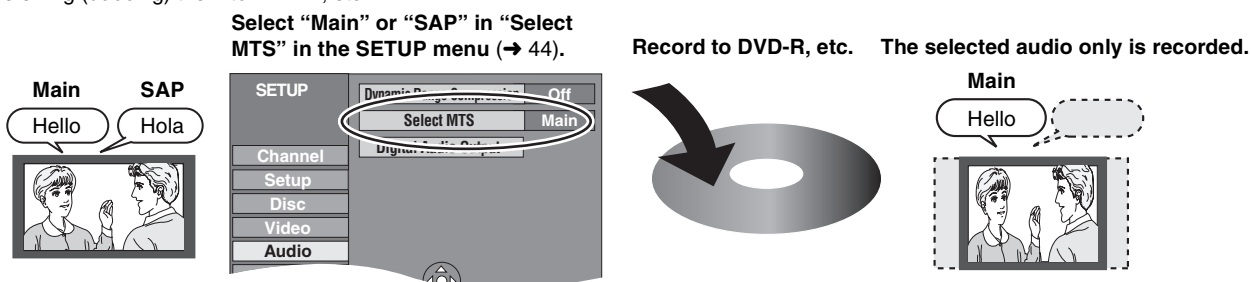


Therefore, follow the steps below when you use DVD-R, etc.

■ When recording an SAP program to DVD-R, etc.

Select the audio to record before recording or transferring (dubbing).

Some television programs are broadcast in SAP (Secondary Audio Program). You have to select the audio recording type before recording or transferring (dubbing) them to DVD-R, etc.

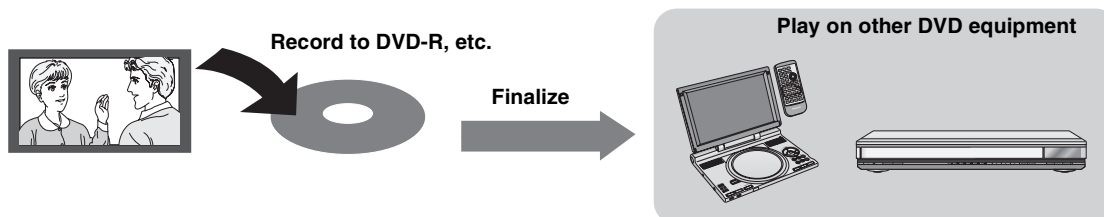


■ Playing the disc on other DVD players

The disc must be finalized after recording or transferring (dubbing) (→ 31).

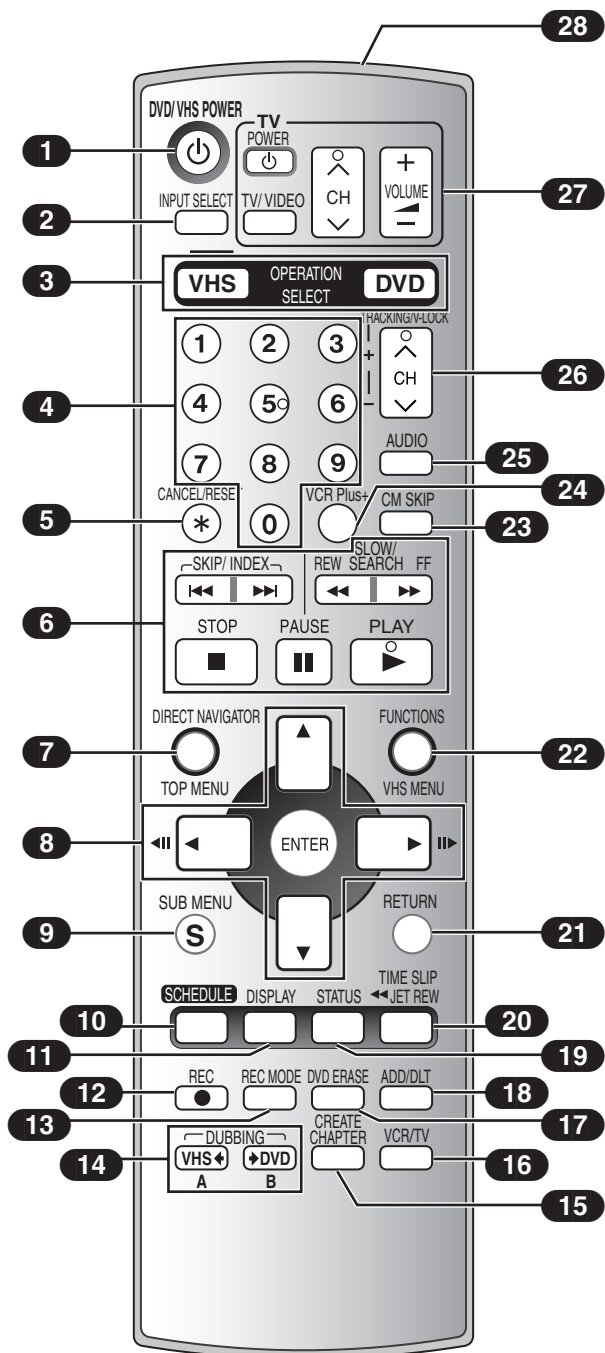
It is necessary to finalize DVD-R, etc. on this unit after recording or transferring (dubbing) titles to them. You can then play them as a commercially sold DVD-Video. However the discs become play-only and you can no longer record or transfer (dub).*

* You can record and transfer (dub) again if you format DVD-RW.



Getting started

Remote control



■ [VHS] and [DVD] button

[DVD]

- Before performing DVD operations, be sure to press the [DVD] button. Also, make sure the DVD indicator lights up on the unit.



[VHS]

- Before performing VHS operations, be sure to press the [VHS] button. Also, make sure the VHS indicator lights up on the unit.



- 1 Turn the unit on. → 16
- 2 Input select (IN1, IN2, TP or DC) → 63
- 3 Select drive (DVD or VHS) → above
- 4 Select channels and title numbers etc./Enter numbers
- 5 Cancel/Reset the tape counter
- 6 Basic operations for recording and play
- 7 Show Top menu/Direct Navigator → 23, 33
- 8 Selection/Enter, Frame-by-frame. → 16, 21
- 9 Show sub menu → 24, 33, 37
- 10 Show scheduled recording list → 29, 53
- 11 Show on-screen menu → 40
- 12 Start recording → 25, 51, 58, 62, 63
- 13 Change recording mode → 25, 51
- 14 One touch transfer (dub) (▶ DVD, VHS ◀) → 57, 59
- View select (A, B) → 60
- 15 Create chapters. → 22
- 16 Select VCR/TV → 20
- 17 Erase items → 22
- 18 Add/delete channel. → 17
- 19 Show status messages → 47, 55
- 20 Skip the specified time/
 - Display the TV image as a picture-in-picture
 - Jet rewind button (JET REW). → 22, 27, 49
- 21 Return to previous screen
- 22 Show FUNCTIONS window → 47
- Show VHS menu → 54
- 23 Skip a minute forward → 22
- 24 Show VCR Plus+ screen → 28, 52
- 25 Select audio. → 23, 25, 55
- 26 Channel select/
 - TRACKING/V-LOCK → 50
- 27 TV operations → 19, 26, 51
- 28 Transmission window

Note

- Buttons such as the [●, REC] button do not protrude as much as other buttons to stop them from being pressed accidentally.
- The word "button" is not used in these operating instructions so "Press the [ENTER] button." is shown as "Press [ENTER]."
- You can use this remote control to operate your TV if you set the TV manufacturer code (→ 19).

Getting started

Batteries and remote control

About batteries

- Insert so the poles (+ and -) match those in the remote control.
- Do not use rechargeable type batteries.

Do not:

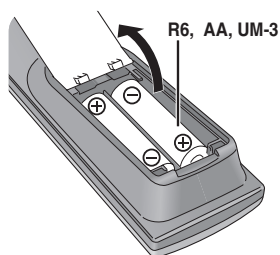
- mix old and new batteries.
- use different types at the same time.
- heat or expose to flame.
- take apart or short circuit.
- attempt to recharge alkaline or manganese batteries.
- use batteries if the covering has been peeled off.

Mishandling of batteries can cause electrolyte leakage which can damage items the fluid contacts and may cause a fire.

Remove if the remote control is not going to be used for a long period of time. Store in a cool, dark place.

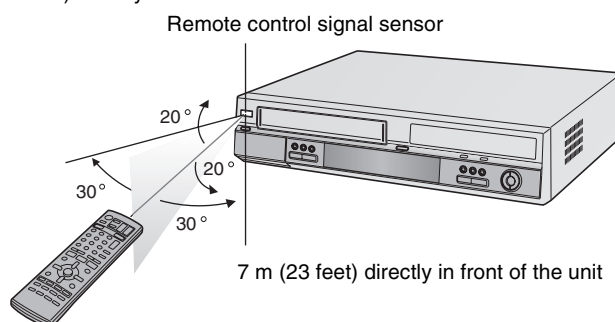
Note

- If you cannot operate the unit or TV using the remote control after changing the batteries, please re-enter the codes (→ 19).



How to use the remote control

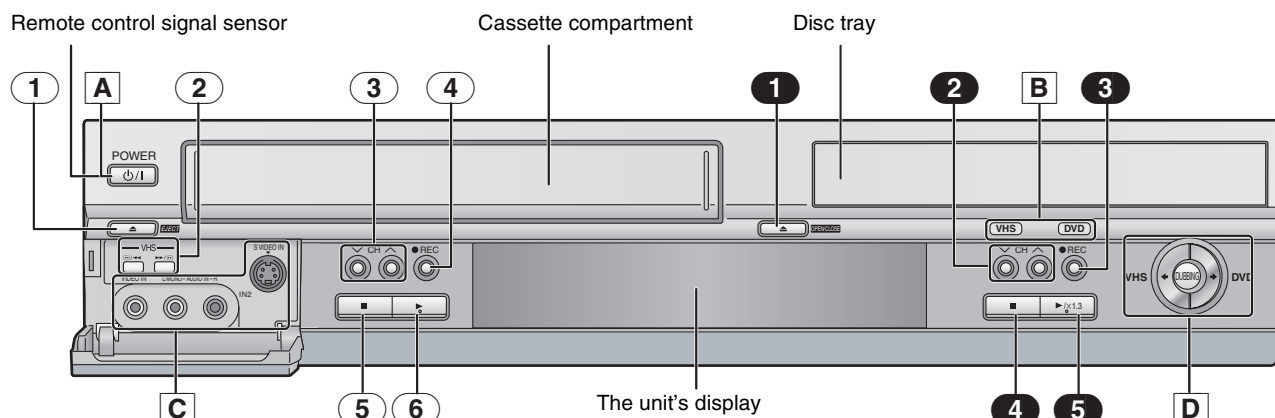
Aim at the sensor, avoiding obstacles, at a maximum range of 7 m (23 feet) directly in front of the unit.



Note

- Keep the transmission window and the unit's sensor free from dust.
- Operation can be affected by strong light sources, such as direct sunlight, inverter fluorescent lamps, and the glass doors on cabinets.

Main unit



Common to DVD/VHS

- A** DVD/VHS POWER on/off button (⏻/⏻, POWER)→ 16
 - To switch the unit from on to standby mode or vice versa.
 - In the standby mode, the unit is still consuming a small amount of power.
- B** DVD/VHS drive indicator
 - Lights when the DVD or VHS drive is selected.
- C** IN2 input terminals (IN2)→ 63
- D** One Touch Transfer (Dubbing) operation button
 - From VHS to DVD→ 57
 - From DVD to VHS→ 59

VHS

- 1** Cassette eject button (⏏, EJECT)→ 48
- 2** VHS Search buttons (⏮/⏮, ⏭/⏭)
- 3** VHS Channel up/down buttons (CH, ⬆, ⬇)→ 50
- 4** VHS Recording button (●, REC).....→ 51
- 5** VHS Stop button (■)→ 49
- 6** VHS Play button (▶)→ 49

DVD

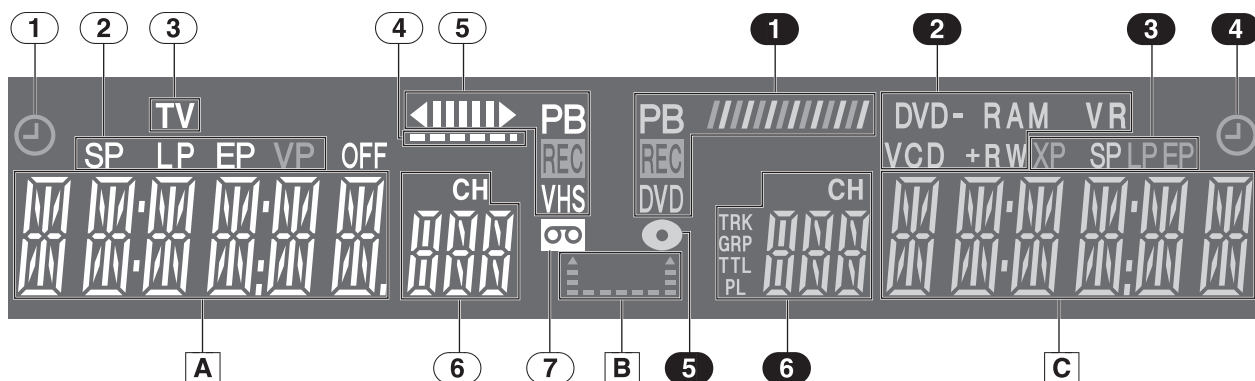
- 1** Disc tray open/close button (⏏, OPEN/CLOSE)→ 8
- 2** DVD Channel up/down buttons (CH, ⬆, ⬇)
- 3** DVD Recording button (●, REC)→ 25
- 4** DVD Stop button (■).....→ 21
- 5** DVD Play/X1.3 button (▶/X1.3).....→ 21

Off Timer

The unit automatically switches to standby when it has not been used for about 6 hours.
You can turn this feature off or change the time to 2 hours.
(→ 43, "Off Timer")

Getting started

■ The unit's display



Common to DVD/VHS

A Main display

- Current time
- VHS recording and play counter
- Scheduled recording start time
- Miscellaneous messages, etc.

B Transfer (Dubbing) direction indicator

C Main display

- Disc recording and play counter
- Scheduled recording end time
- Miscellaneous messages, etc.

VHS

① Scheduled recording indicator (⊖) (→ 52)

On:

When a scheduled recording program is registered and recordable tape is inserted.

Flashes:

When it turns out that the unit cannot record a scheduled recording program (e.g. there is no tape, etc.) in the period between 2 minutes before the scheduled recording program starts and the end of the scheduled recording program.

② Recording mode indicator (→ 51)

- SP: When recording or playing in Normal mode.
- LP: When playing in Long play mode.
- EP: When recording or playing in Extra long play mode.
- VP: When recording or playing in 5-time (Long play) mode.

③ TV indicator

- The indicator lights during the TV mode and it goes out during the VCR mode. You can switch the mode by using [VCR/TV]. (→ 20)

④ Remaining tape time indicator

⑤ Tape operation status

- The operation status of the unit, such as playback or fast-forward, is displayed.

⑥ Channel

⑦ Tape indicator

DVD

① Disc operation status

② Disc type

③ Recording mode indicator (→ 25)

- XP SP LP EP (all on): FR mode (→ 26)

④ Scheduled recording indicator (⊖) (→ 28)

On:

When a scheduled recording program is registered and a recordable disc is inserted.

Flashes:

When it turns out that the unit cannot record a scheduled recording program (e.g. there is no disc, etc.) in the period between 2 minutes before the scheduled recording program starts and the end of the scheduled recording program.

⑤ Disc indicator

⑥ Channel position indicator

TRK: Track number

GRP: Group number

TTL: Title number

PL: Playlist number

CH: Channel

Accessories

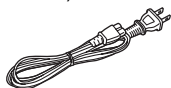


Please check and identify the supplied accessories. Use numbers indicated in parentheses when asking for replacement parts. (Product numbers correct as of January 2005. These may be subject to change.)

Only for U.S.A.: To order accessories, refer to "Accessory Purchases" on page 73.

Only for Canada: To order accessories, call the dealer from whom you have made your purchase.

- ☐ 1 AC power supply cord
(K2CB2CB00006)



- For use with the unit only. Do not use it with other equipment. Also, do not use cords belonging to other equipment with the unit.

- ☐ 1 75 Ω coaxial cable
(K2KZ2BA00001)



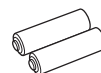
- ☐ 1 Audio/Video cable
(K2KA6CA00001)



- ☐ 1 Remote control
(EUR7720KY0)



- ☐ 2 Batteries for the remote control
R6 size



(U.S.A. only)

Product Registration Card

Please complete and return the included product registration card, or register via the Internet at:
<http://www.prodreg.com/panasonic/>

Getting started

STEP 1 Connection

- Please read "Precautions For Installation". (→ 3)
- Before connection, turn off all equipment and read the appropriate operating instructions.

■ Connecting a TV and VCR

— indicates included accessories.
 — indicates accessories not included.

- Red
- White
- Yellow

■ Connection (without Audio/Video cable)

Connect in numerical order ① to ③.

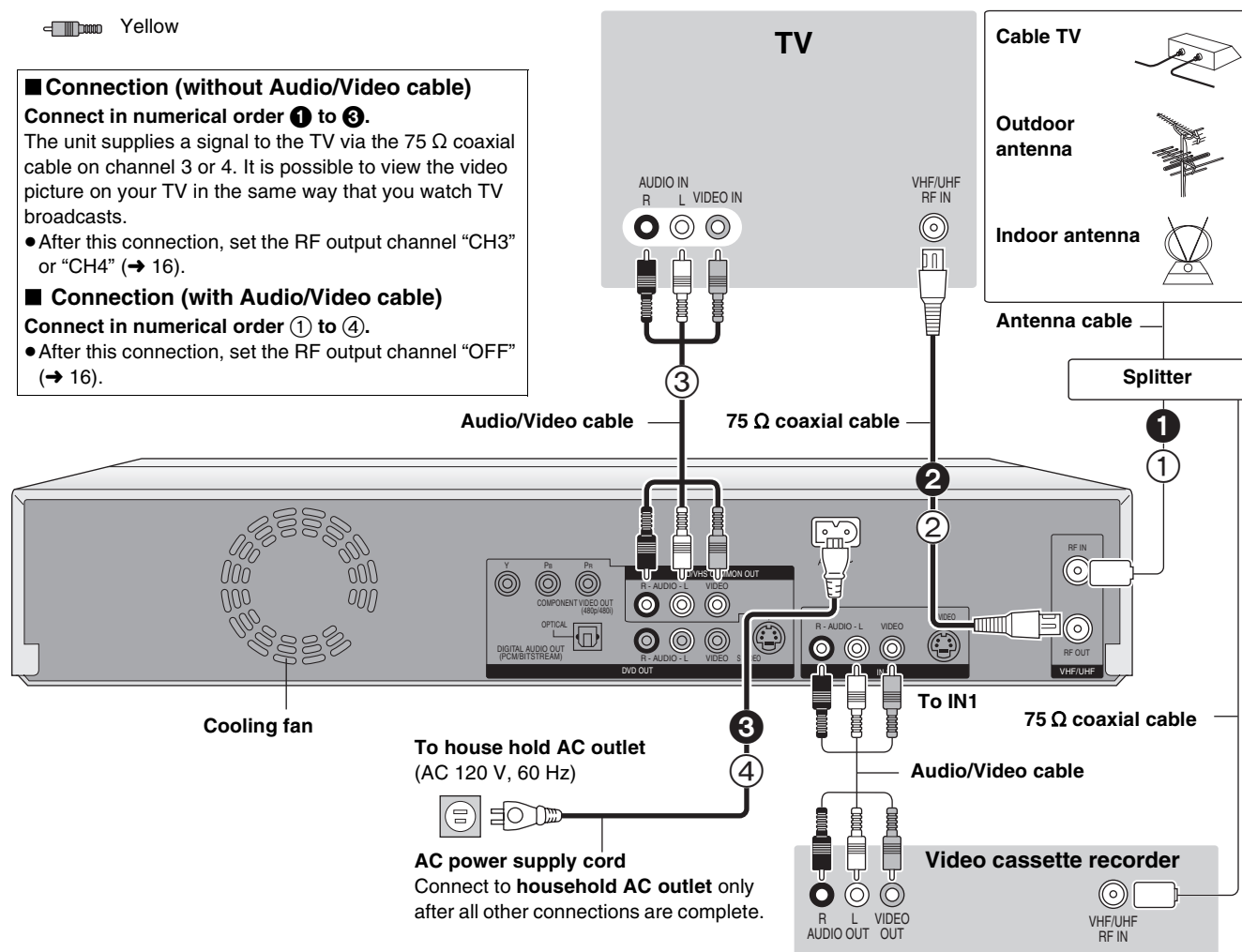
The unit supplies a signal to the TV via the 75 Ω coaxial cable on channel 3 or 4. It is possible to view the video picture on your TV in the same way that you watch TV broadcasts.

- After this connection, set the RF output channel "CH3" or "CH4" (→ 16).

■ Connection (with Audio/Video cable)

Connect in numerical order ① to ④.

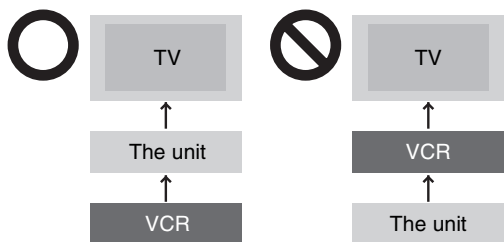
- After this connection, set the RF output channel "OFF" (→ 16).



- If the antenna connector doesn't match (→ 14)

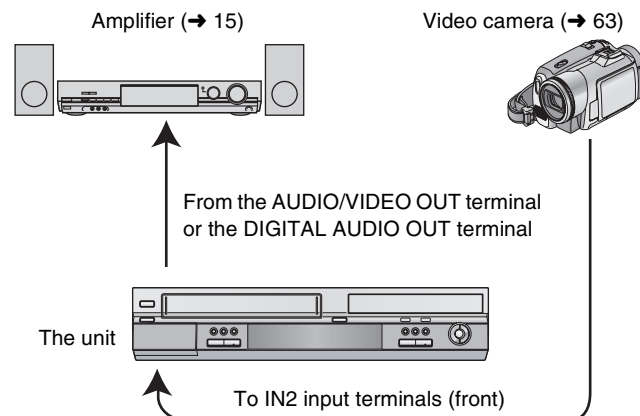
■ Do not connect the unit through a video cassette recorder

Video signals sent through video cassette recorders will be affected by copyright protection systems and the picture will not be shown correctly on the TV.



- When connecting the unit to a TV with a built-in VCR, connect to the input terminals on the TV, not the VCR.

■ Connection examples with other equipment



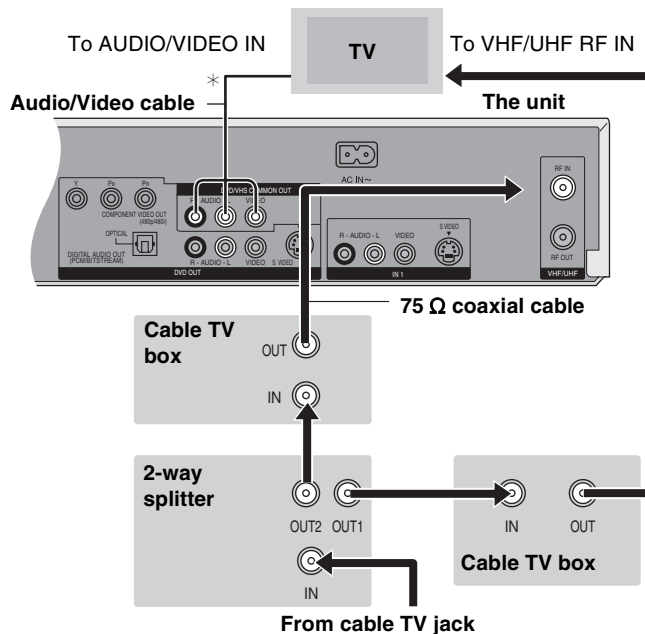
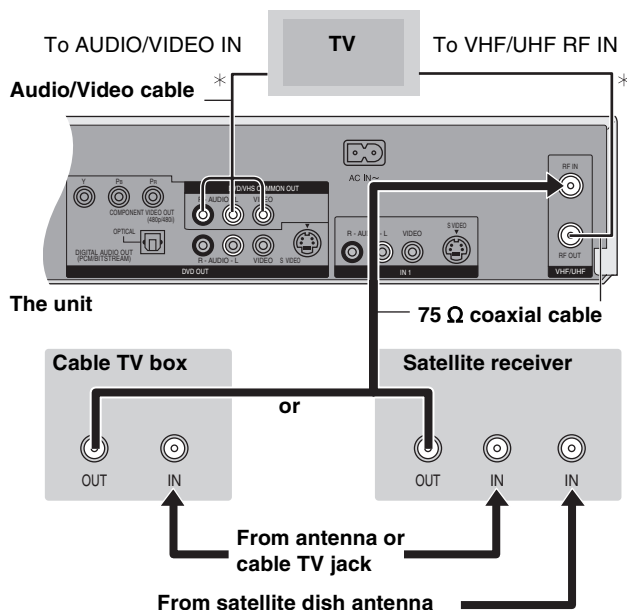
For your reference

- The equipment connections described are examples.
- Peripheral equipment and optional cables are sold separately unless otherwise indicated.

Getting started

■ Connecting a cable TV box/satellite receiver

- You need to subscribe to a cable TV or satellite TV service to enjoy viewing their programming.
- Consult your service provider regarding appropriate cable TV box or satellite receiver.
- You can enjoy viewing cable TV or satellite TV programming.
- You can record and view scrambled and unscrambled channels simultaneously if connections are made as shown in the diagram below.



* For more information on connections (→ 13)

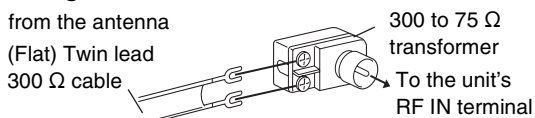
■ If the antenna connector does not match

► Other antenna connections to the unit

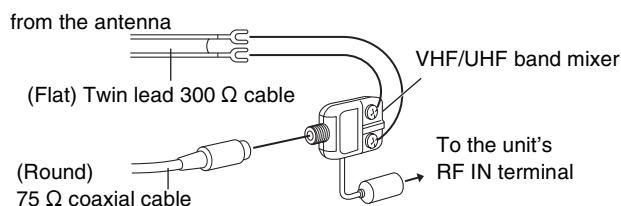
Use one of the following connections to suit your antenna lead.

- If your TV has both lead and coaxial VHF terminals, use the lead connection to minimize signal loss.

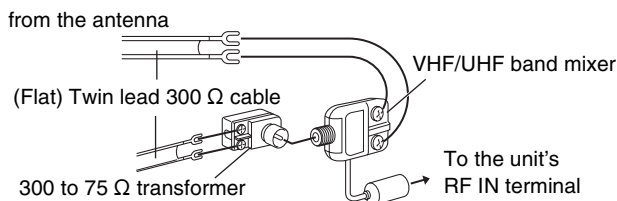
■ A single twin lead



■ A twin lead and a coaxial cable



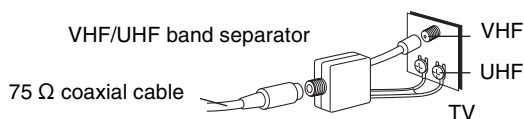
■ 2 twin leads



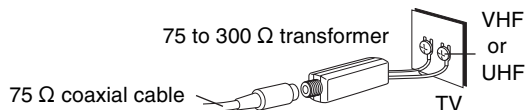
► Other antenna connections from the unit to the TV

Use one of the following connections to suit the antenna terminals on your TV. Refer to the TV's operating instructions.

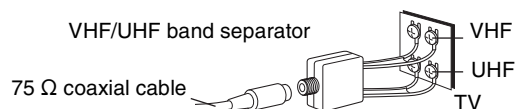
■ A twin lead and coaxial plug terminal



■ A twin lead terminal

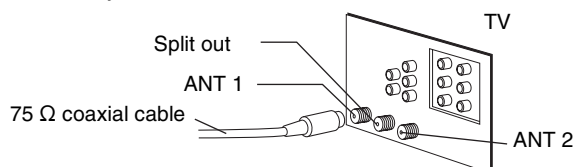


■ 2 twin lead terminals



■ Multiple antenna terminals

- Connect to one of the ANT terminals, then change the TV's setting as necessary.



Getting started

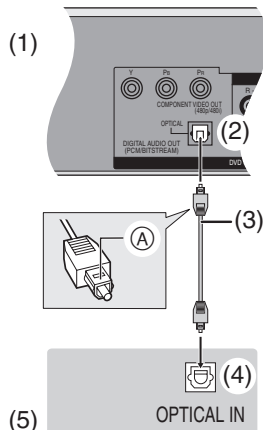
■ Connecting an amplifier or system component

► To enjoy multi-channel surround sound on DVD-Video (digital connection)

DVD only

- Connect an amplifier with a built-in Dolby Digital or DTS decoder. (→ 7)
- Change the settings in “Digital Audio Output”. (→ 44)
- You cannot use any amplifier with a DTS Digital Surround decoder not suited to DVD.
- Even if using this connection, output will be only 2 channels when playing DVD-Audio

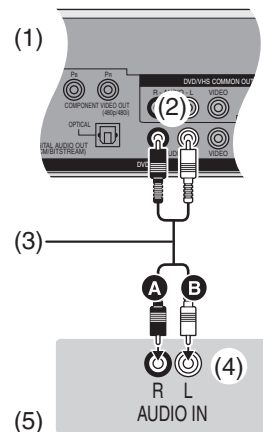
- (1) Rear panel of the unit
- (2) Optical digital output terminal
- (3) **Optical digital audio cable** (not supplied)
 - Insert fully, with this side facing up. (Do not bend when connecting.)
- (4) Optical digital input terminal
- (5) Amplifier's rear panel



► Connection to a stereo amplifier (analog connection)

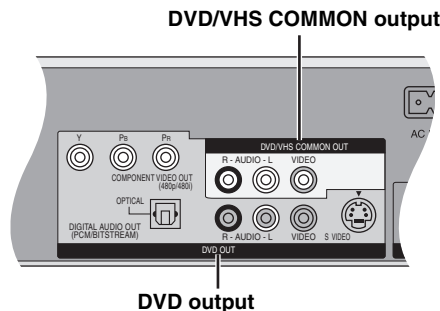
DVD only

- (1) Rear panel of the unit
- (2) Audio output terminals (L/R)
- (3) Audio cable (not supplied)
 - Red (R)
 - White (L)
- (4) Audio input terminals (L/R)
- (5) Amplifier's rear panel



■ DVD output and DVD/VHS output

The unit has DVD/VHS COMMON output terminals and DVD output terminals.



DVD/VHS COMMON OUT

- For DVD/VHS COMMON output terminals, both DVD and VHS signals can be output.

DVD OUT

- This is the dedicated terminal to enjoy pictures played on DVD in higher picture quality. (→ below)
- The DVD output terminals can only output the DVD signal. If your TV is connected to the DVD output terminals, the VHS picture is not displayed on your TV unless you select the TP channel (→ 58).

■ To enjoy even higher fidelity

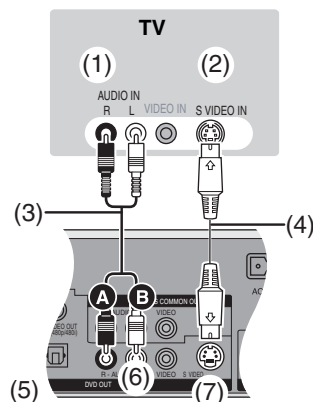
► Connection to the S-VIDEO IN terminal

DVD only

S-VIDEO OUT terminal

The S-VIDEO OUT terminal achieves a more vivid picture than the VIDEO OUT terminal. (Actual results depend on the TV.)

- (1) Audio input terminals (L/R)
- (2) S-Video input terminal
- (3) Audio cable (not supplied)
 - Red (R)
 - White (L)
- (4) S-Video cable (not supplied)
- (5) Rear panel of the unit
- (6) Audio output terminals (L/R)
- (7) S-Video output terminal



► Connection to the COMPONENT VIDEO IN terminals

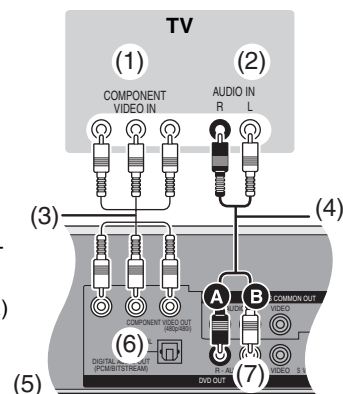
DVD only

COMPONENT VIDEO OUT terminal

These terminals can be used for either interlace or progressive output (→ 64) and provide a purer picture than the S-VIDEO OUT terminal.

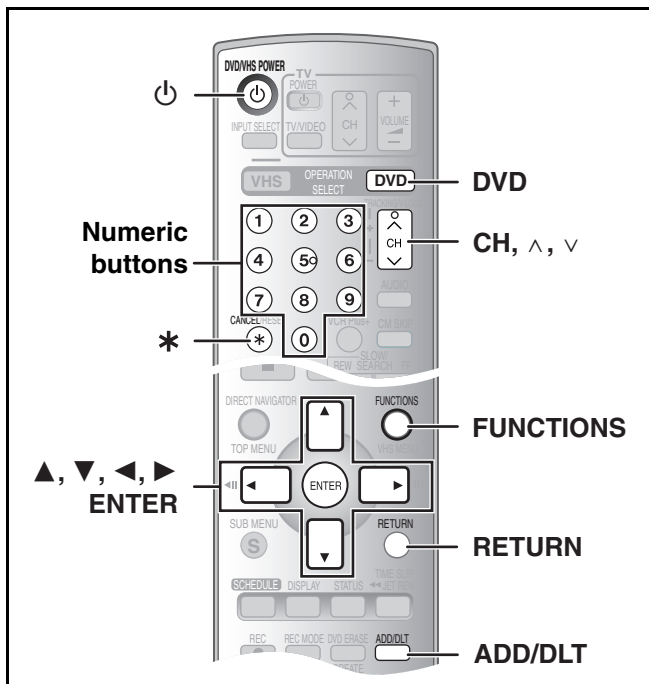
- Connect to terminals of the same color.

- (1) Component input terminals
- (2) Audio input terminals (L/R)
- (3) Component video cable (not supplied)
- (4) Audio cable (not supplied)
 - Red (R)
 - White (L)
- (5) Rear panel of the unit
- (6) COMPONENT VIDEO OUT terminals
- (7) Audio output terminals (L/R)



Getting started

STEP 2 Plug-in Auto Tuning



After plugging the unit into your household AC outlet and pressing [⏻, DVD/VHS POWER] to turn the unit on for the first time, the unit assists you to set the on-screen language, and automatically tunes in all the channels it can receive and sets the clock.

The unit automatically determines the type of transmission (airwaves or cable) and puts them into channels as follows.

	Band	Channel
Antenna Mode (Airwaves)	VHF	2 to 13
	UHF	14 to 69
CableTV Mode (Cable)	VHF	2 to 13
	CATV LOW BAND	95 to 99
	CATV MID/SUPER BAND	14 to 36
	CATV HYPER BAND	37 to 65
	ULTRA BAND	66 to 94 100 to 125
	SPECIAL CATV CHANNEL	1

Preparation

- Turn on the TV and select the appropriate video input to suit the connections to the unit. (Example: AV input, CH3 or CH4)
- If you connect the unit through a cable TV box or satellite receiver (→ 14), tune to your local PBS for Auto Clock Setting to work. If there is no local PBS, set the clock manually (→ 46, "Set Clock Manually").
- Press [DVD].

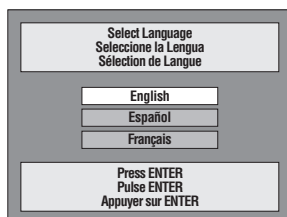
1 Press [⏻, DVD/VHS POWER].

2 Press [CH, ^, v] to select an RF output channel number.

Connection (without Audio/Video cable):

Select "CH3" or "CH4" which displays the screen on the right.

Connection (with Audio/Video cable):
Select "OFF"



The unit's display



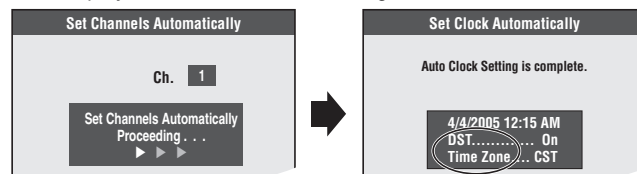
The unit's display

Each time you press the button:
CH 3 (Default setting) ↔ CH4 ↔ OFF

3 Use [▲, ▼] to select the language and press [ENTER].

4 Press [ENTER] to start Plug-in Auto Tuning.

- The unit then proceeds with Auto Clock Setting. The time is displayed when Auto Clock Setting is finished.



- DST, Daylight Saving Time, shows the summertime setting.
- Time Zone shows the time difference from Greenwich Mean Time (GMT).

EST (Eastern Standard Time) = GMT -5
CST (Central Standard Time) = GMT -6
MST (Mountain Standard Time) = GMT -7
PST (Pacific Standard Time) = GMT -8
AST (Alaska Standard Time) = GMT -9
HST (Hawaii Standard Time) = GMT -10
For other areas: xx hr

5 Press [ENTER].

■ If the clock is an hour slower or faster than the actual time

Select "-1" or "+1" in "Adjust Time Zone" in the SETUP menu (→ 46).

■ If the unit couldn't set the clock automatically

Set the time manually (→ 46, "Set Clock Manually").

■ To start Plug-in Auto Tuning again

Signal source, RF output channel, channel caption, and guide channel settings for VCR Plus+ system all revert to the default values when you perform the procedure below. Scheduled recording settings are also cleared.

When the unit is on and stopped

- 1 Press and hold [CH, ^] and [CH, v] on the DVD side of the main unit for about 5 seconds.
The unit turns off.
- 2 Press [⏻, DVD/VHS POWER] to turn the unit on.
Plug-in Auto Tuning starts.

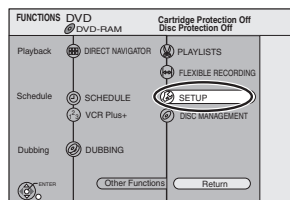
Getting started

■ If Plug-in Auto Tuning fails

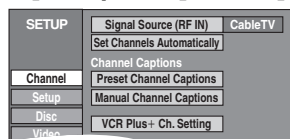
Preparation

- Press [DVD].

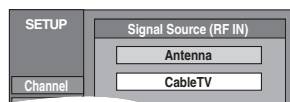
- 1 While stopped
Press [FUNCTIONS].
- 2 Select "Other Functions" with [▲, ▼] and press [ENTER].



- 3 Select "SETUP" with [▲, ▼] and press [ENTER].



- 4 Select "Channel" with [▲, ▼] and press [◀, ▶].
- 5 Select "Signal Source (RF IN)" with [▲, ▼] and press [ENTER].



- 6 Select "Antenna" or "CableTV" with [▲, ▼] and press [ENTER].
- 7 Select "Set Channels Automatically" with [▲, ▼] and press [ENTER].
- 8 Press [ENTER].
- Auto Channel Setting starts. This takes a few minutes.
- 9 Press [ENTER].

■ To cancel in the middle

Press [RETURN].

■ To exit the screen

Press [RETURN].

■ Adding and deleting channels

Add or delete channels if necessary channels are not set or unnecessary channels are set.

- 1 Press the numeric buttons to select a channel.

Antenna Mode (Airwaves)

e.g., "5": [0]→[5]

"15": [1]→[5]

CableTV Mode (Cable)

e.g., "5": [0]→[0]→[5]

"15": [0]→[1]→[5]

"115": [1]→[1]→[5]

- You can also use [CH, ▲, ▼] to select a channel.

The unit's display



- 2 Press [ADD/DLT].

e.g., The channel is deleted.

Channel 15 Deleted

STEP 3 Channel settings

■ Guide channel settings for VCR Plus+ system

Set these guide channels so you can use VCR Plus+® system for scheduled recording. Before starting the settings, prepare a chart showing the channels, station names, and guide channels.

e.g., :

Station name	Guide channel*	Channel number**	Channel setting
CBS	04	04	Unnecessary
HBO	33	15	Enter channel 15 next to Guide Channel 33.
Nickelodeon	38	20	Enter channel 20 next to Guide Channel 38.

* Look up the guide channels for the stations in magazines.

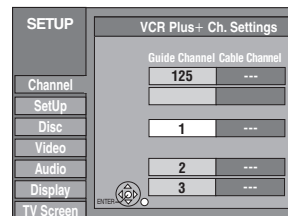
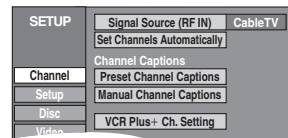
** Write down all the stations you can receive.

- If you have connected a cable TV box or satellite receiver, the VCR Plus+ system does not work so you do not have to set the guide channels.

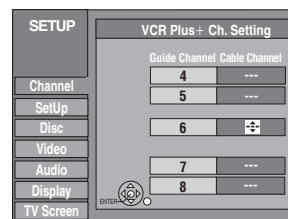
Preparation

- Press [DVD].

- 1 While stopped
Press [FUNCTIONS].
- 2 Select "Other Functions" with [▲, ▼] and press [ENTER].
- 3 Select "SETUP" with [▲, ▼] and press [ENTER].
- 4 Select "Channel" with [▲, ▼] and press [◀, ▶].
- 5 Select "VCR Plus+ Ch. Setting" with [▲, ▼] and press [ENTER].



- 6 Use [▲, ▼] to select the guide channel you want to set and press [▶].
- When selecting the guide channel, press and hold [▲, ▼] to scroll up and down the screen quickly.
- 7 Use [▲, ▼] to select the channel corresponding to the guide channel and press [◀].
- To delete a number, press [CANCEL/RESET, *].
- Repeat steps 5 and 6 to enter other channels.
- 8 Press [ENTER].



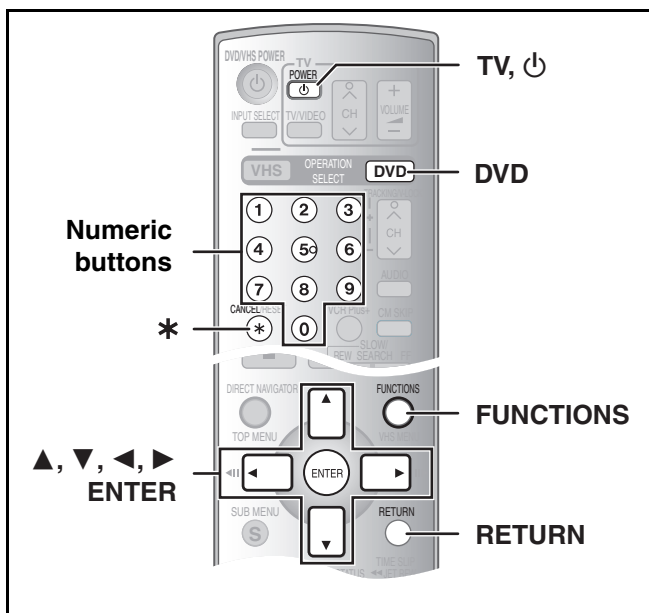
■ To return to the previous screen

Press [RETURN].

■ To exit the screen

Press [RETURN].

Getting started



Preparation

- Press [DVD].

Channel captions

You can use the preset captions, or manually enter new ones yourself.

The captions you enter are used as channel names and displayed on the Direct Navigator screen.

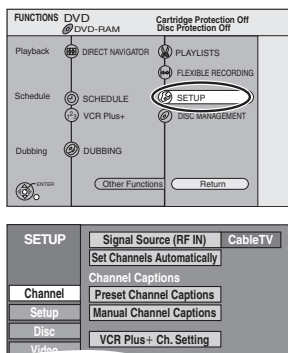
- 1 While stopped Press [FUNCTIONS].

- 2 Select "Other Functions" with [▲, ▼] and press [ENTER].

- 3 Select "SETUP" with [▲, ▼] and press [ENTER].

- 4 Select "Channel" with [▲, ▼] and press [◀, ▶].

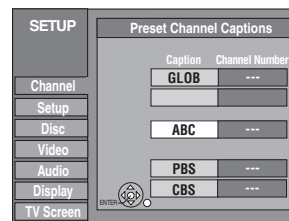
- Go to the item you want to set next.



Preset Channel Captions

- Follow steps 1 to 4 of "Channel captions".

- 5 Select "Preset Channel Captions" with [▲, ▼] and press [ENTER].



- 6 Use [▲, ▼] to select the caption and press [▶].

You can choose from the following captions.

ABC, PBS, CBS, CNN, FOX, ESPN, NBC, HBO, A&E, AMC, FAM, MAX, MTV, SHOW, TBS, USA, TNT, CBC, UPN, CTV, WB, TSN, DSC, GLOB

- When selecting the caption, press and hold [▲, ▼] to scroll up and down the screen quickly.

- 7 Use [▲, ▼] to select the channel corresponding to the caption and press [◀].

- Channels are displayed only when they contain a station and if captions have not been added manually.

- To delete the channel number, press [CANCEL/RESET, *].

- Repeat steps 6 and 7 as necessary.

- 8 Press [ENTER].

To return to the previous screen

Press [RETURN].

To exit the screen

Press [RETURN].

Manual Channel Captions

- Follow steps 1 to 4 of "Channel captions".

- 5 Select "Manual Channel Captions" with [▲, ▼] and press [ENTER].

- 6 Use [▲, ▼] to select the channel and press [▶].

- Channels are only displayed if they contain a station and if preset captions have not been added.

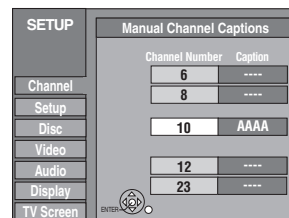
- 7 Use [▲, ▼] to select the first character and press [▶].

- You can choose from the following characters:

A to Z, 0 to 9, -, &, !, /, (space)

- To delete the caption, press [CANCEL/RESET, *].

- Repeat this step to enter the other characters.



- 8 Use [◀, ▶] to return to the "Channel Number" column.

- Repeat steps 6 to 8 to enter other channels.

- 9 Press [ENTER].

To return to the previous screen

Press [RETURN].

To exit the screen

Press [RETURN].

Getting started

STEP 4 Set up to match your TV and remote control

Preparation

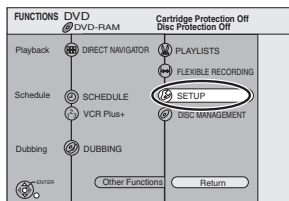
- Press [DVD].

When other Panasonic products respond to this remote control

Change the remote control code on the main unit and on the remote control (the two must match) if you place other Panasonic products close together. When changing the remote control code, make sure the two codes are same.

Use "1", the factory set code, under normal circumstances.

- 1 While stopped
Press [FUNCTIONS].
- 2 Select "Other Functions" with [▲, ▼] and press [ENTER].
- 3 Select "SETUP" with [▲, ▼] and press [ENTER].
- 4 Select "Setup" with [▲, ▼] and press [◀, ▶].
- 5 Select "Remote Control Code" with [▲, ▼] and press [ENTER].
- 6 Use [▲, ▼] to select the code (1, 2 or 3) and press [ENTER].
 - The code on the unit has been set.
- 7 While pressing [ENTER], press and hold for about 2 seconds the numeric button ([1], [2] or [3]) corresponding to the code you selected in step 6.
 - The code on the remote control has been set.
- 8 Press [ENTER].



When the following indicator appears on the unit's display



The unit's remote control code

Change the code on the remote control to match the main unit's code (→ step 7).

To return to the previous screen

Press [RETURN].

To exit the screen

Press [RETURN].

TV operation

To turn the TV on/off, change the TV input mode, select the TV channel and change the TV volume by means of this remote control, set the remote control as follows.

Point the remote control at the TV

While pressing [⏻ POWER TV], enter the code using the numeric buttons.

e.g., 01: press [0] → [1].

Manufacturer and Code No.

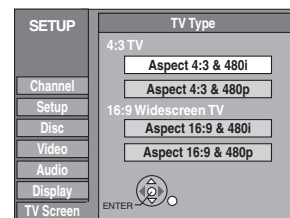
Panasonic		PHILIPS (RC-5)	03
National	01, 02	RCA	05
QUASAR		SAMSUNG	14, 18, 19
FISHER	10	SANYO	10
GE	05	SHARP	06, 07
GOLDSTAR	15, 16, 17	SONY	08
HITACHI	12	SYLVANIA	03
JVC	11	THOMSON	05
LG	15, 16, 17	TOSHIBA	09
MAGNAVOX	03	ZENITH	04
MITSUBISHI	13		

- Test by turning on the TV and changing channels. Repeat the procedure until you find the code that allows correct operation.
- If your TV brand is not listed or if the code listed for your TV does not allow control of your TV, this remote control is not compatible with your TV.

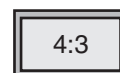
Selecting TV type

You do not have to change the setting when connected to a 4:3 standard aspect TV that is not compatible with progressive output. (→ 64)

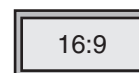
- 1 While stopped
Press [FUNCTIONS].
- 2 Select "Other Functions" with [▲, ▼] and press [ENTER].
- 3 Select "SETUP" with [▲, ▼] and press [ENTER].
- 4 Select "TV Screen" with [▲, ▼] and press [◀, ▶].
- 5 Select "TV Type" with [▲, ▼] and press [ENTER].



- Aspect 4:3/Aspect 16:9:



4:3 standard aspect TV



16:9 widescreen TV

- 480p/480i:
Select "480p" if the TV is compatible with progressive output.

- 6 Use [▲, ▼] to select the item and press [ENTER].

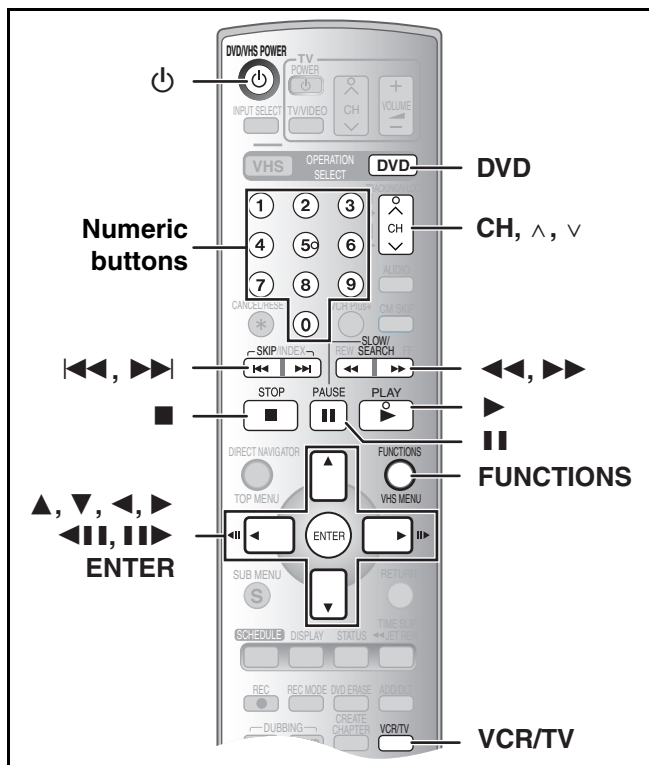
To return to the previous screen

Press [RETURN].

To exit the screen

Press [RETURN].

Getting started



■ Removing Interference

Connection (without Audio/Video cable) only

TV screen



Picture with interference

In some cases, interference (lines or patterning) or a very poor picture may appear on the TV when the DVD Recorder is connected. If this happens, follow the steps below to change the video playback channel (RF output channel) to remove the interference.

1 Press [FUNCTIONS] for more than 5 seconds.

The RF output channel number is displayed on the unit display.

2 Press [CH, ^, v] to select a channel number (CH3 or CH4).

- (For example, if the original channel number was 3, enter 4.)

<Before Changing>

<Before Changing>



The unit's display



Indication when the RF output channel is 3 (example)



The unit's display



Indication after changing the RF output channel to 4 (example)

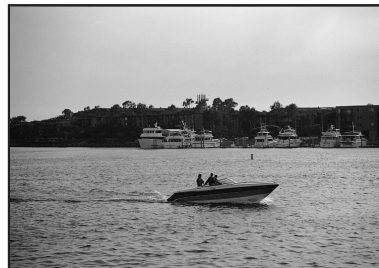
The unit's display

Each time you press the button:

CH 3 (Default setting) ↔ CH4 ↔ OFF

- Set the RF output channel of the DVD Video Recorder to "OFF" (RF OFF) when the DVD Video Recorder is connected to the TV via the Audio/Video cable.

3 Press [ENTER] to finish this setting.



The clear picture

■ When you set the RF output channel to "CH3" or "CH4"

A picture is output on CH3 or CH4 from RF output.

Press [VCR/TV] to switch the mode from TV to VCR, and vice versa.

- When the TV mode is selected, the "TV" indicator lights on the unit's display and you can watch TV.
- When the "TV" indicator does not light on, then VCR mode is selected and you can watch images from the unit.

Preparation

- Turn on the TV and select the appropriate video input to suit the connections to the unit.
- Press [DVD].

Playing discs

RAM -R -RW(V) +R DVD-A DVD-V -RW(VR) VCD CD

- 1 Press [⏻, DVD/VHS POWER] to turn the unit on.
- 2 Insert a disc. (→ 8)
- 3 Press [▶, PLAY].

- The disc tray closes and play begins.
(The unit takes some time to read the disc before play starts.)
- Playback starts from the most recently recorded title.

RAM -R -RW(V) +R -RW(VR)

- Playback starts from the beginning of the disc.

DVD-A DVD-V VCD CD

To stop play

Press [■, STOP]. (→ right, "Resume Function")

- The screen saver on the right may appear when you stop play. Press [■, STOP] again and you can use the unit's tuner to watch TV.

DVD-A DVD-V VCD CD

Screen saver



To pause play

Press [⏸, PAUSE]. (Press again to restart play.)

When a menu screen appears on the TV

VCD

Press the numeric buttons to select an item.

e.g.: "5": [0]→[5]

"15": [1]→[5]

DVD-A DVD-V

Press [▲, ▼, ◀, ▶] to select an item and press [ENTER].

- You can sometimes use the numeric buttons to select an item.

Other buttons used to operate menus

Read the disc's instructions for further details about operation.

Note

- If "⊙" appears on the TV, the operation is prohibited by the unit or disc.

Quick View (Play ×1.3)

RAM

The play speed can be increased without distorting the audio.

During Play

Press and hold [▶, PLAY].



To return to normal speed

Press [▶, PLAY].

Starting play from where you stopped it (Resume Function)

RAM -R -RW(V) +R DVD-A DVD-V -RW(VR) VCD CD

1 During Play

Press [■, STOP].

- Play stops and "PB" flashes on the unit's display (Excluding when playing from the Direct Navigator and when playing a playlist.). The unit memorizes the position.



2 Press [▶, PLAY].

- Play starts from where you stopped it.

To cancel the resume function

Press [■, STOP] several times, "PB" disappears on the unit's display.
(This function is also canceled when you turn the unit off or the tray is opened.)



Fast forward and rewind — SEARCH

RAM -R -RW(V) +R DVD-A DVD-V -RW(VR) VCD CD

During Play

Press [◀◀, SLOW/SEARCH] or [▶▶, SLOW/SEARCH].

- There are 5 search speeds. Each press increases the search speed.
- Press [▶, PLAY] to restart playback.

e.g., DVD-RAM



For your reference

- Sound is output only in the first level of fast forward. In the case of DVD-Audio (except motion picture parts), CD and MP3, it is output in all levels.
- Depending on the disc, search may not be possible.

Skipping

RAM -R -RW(V) +R DVD-A DVD-V -RW(VR) VCD CD

During play or while paused

Press [◀◀, SKIP] or [▶▶, SKIP].

- Each press increases the number of skips.

Slow-motion play

RAM -R -RW(V) +R DVD-A (Motion picture parts only) DVD-V -RW(VR) VCD

While paused

Press [◀◀, SLOW/SEARCH] or [▶▶, SLOW/SEARCH].

- When slow motion play is continued for about 5 minutes it pauses automatically (excluding DVD-A DVD-V VCD).
- There are 5 play speeds. Each press increases the play speed.
- Press [▶, PLAY] to restart playback.
- VCD Forward direction ([▶▶, SLOW/SEARCH]) only.

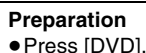
Frame-by-frame viewing

RAM -R -RW(V) +R DVD-A (Motion picture parts only) DVD-V -RW(VR) VCD

While paused

Press [◀◀] ([◀]) or [▶▶] ([▶]).

- Each press shows the next or previous frame.
- Press and hold in succession forward or backward.
- Press [▶, PLAY] to restart playback.
- VCD Forward direction ([▶▶], [▶]) only.



RAM -R -RW(V) +R DVD-A DVD-V -RW(VR) VCD CD

You can play from the title, chapter or track you select.

Press the numeric buttons to select an item.

CD (MP3, JPEG and TIFF disc only)

e.g.: "5": $[0] \rightarrow [5]$ "5": $[0] \rightarrow [0] \rightarrow [5]$
 "15": $[1] \rightarrow [5]$ "15": $[0] \rightarrow [1] \rightarrow [5]$

DVD-A

A group number can be specified while the screen saver (→ 21) is displayed.

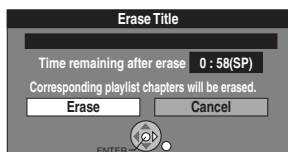
e.g.: "5": [5]

- This works only when stopped (screen saver is displayed) with some discs.
- **Playing bonus groups**
Some discs contain bonus groups. If a password screen appears after selecting a group, enter the password with the numeric buttons and press [ENTER]. For the password, refer to the disc's jacket, etc.

RAM -R -RW(V) +R

Once title is erased, it cannot be restored. Make certain before proceeding.

- 1** During Play
Press [DVD ERASE].
- 2** Press [◀] to select
“Erase” and press
[ENTER].



- You cannot erase while recording or transferring (dubbing).
- **-R +R** Available space does not increase after erasing.
- **-RW(V)** Disc space increases only when the last recorded title is erased.

RAM -R -RW(V) +R -RW(VR)

You can skip approximately 1 minute with one press.

During play
Press [CM SKIP].

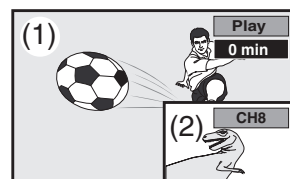
RAM -R -RW(V) +R -RW(VR)

Press [TIME SLIP] during play and the PIP (Picture-In-Picture) screen (TV image) is displayed in the lower right part of the main screen. You can watch both playback images and TV images at the same time. In the main screen, you can also instantly access a scene you want to view by specifying an amount of time you want to skip.

- Press [TIME SLIP].**

- The PIP screen (TV images) appears.
- You can change the channel being received by pressing [CH, ^, v].

- You will hear the playback audio of the main screen.

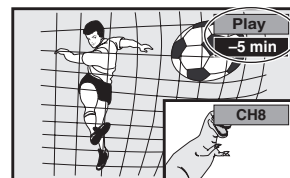


(1) Play images

(2) Currently receiving images

- 2** While observing the time indicator at the top right Press **[▲, ▼]** to set an amount of time to skip and press **[ENTER]**.

- Play skips the amount of time you specified.
- The time indicator will go off after about 5 seconds, but will turn on again when you set the time.
- Press [▲, ▼] to alter in 1-minute units. Press and hold [▲, ▼] to alter in 10-minute units.



■ To clear the PIP screen

Press [TIME SLIP].

For your reference

- The blue background does not appear on the PIP screen (→ 45).
- You cannot change the channel being received while the PIP screen is being recorded.

RAM

During play

Press **[CREATE CHAPTER]**.

- Press [**◀◀**, SKIP] or [**▶▶**, SKIP] to skip to the start of a chapter.
- You cannot activate this function when you are carrying out TIME SLIP (→ 27) or transfer (dub).

Changing audio during play

Press [AUDIO] to select the audio type.

- You can select audio types depend on the recording medium.

RAM -RW(VR) VCD (→ 47)

Stereo → Mono L → Mono R

e.g.: **RAM**

"Stereo" is

selected.

DVD-RAM

Play

Stereo

RAM -RW(VR) [When playing an SAP broadcast recorded on DVD-RAM, DVD-RW (DVD Video Recording format)]

MAIN ↔ SAP

DVD-A DVD-V (→ 40)

This allows you to change items like the audio channel number and the sound track language.



e.g.: English is the selected language. **DVD-V**

Note

- If you cannot change the audio type when you have used only an optical digital cable for connection, set "Dolby Digital" to "PCM" (→ 44). Alternatively, you may connect to an amplifier with an Audio/Video cable and change the input on the amplifier to suit the connection.

Playing discs which contain both MP3 and still pictures

CD

The screen shown below is displayed when you insert a disc containing MP3 files and still pictures (JPEG/TIFF).

Press [ENTER].

■ To play MP3

Refer to "Using menus to play MP3 discs".

(→ right)

■ To play still pictures

Refer to "To show JPEG Menu". (→ 24)

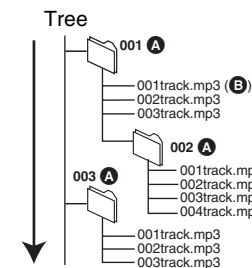
Playback mode is set to MP3.
If you want to play picture (JPEG),
select JPEG Menu from Menu in FUNCTIONS.



- You can play MP3 and still pictures (JPEG/TIFF) on this unit by making folders as shown below. However depending on how you create the disc (writing software), play may not be in the order you numbered the folders.
- English alphabetical characters and Arabic numerals are displayed correctly. Other characters may not be displayed correctly.
- When the highest level folders are "DCIM" folders, they are displayed first on the tree.

Structure of MP3 folders

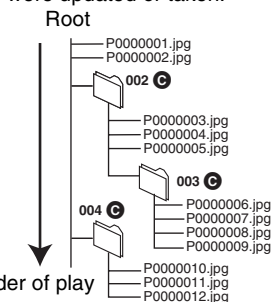
Prefix with 3-digit numbers in the order you want to play them.



Order of play

Structure of still pictures (JPEG/TIFF)

Files inside a folder are displayed in the order they were updated or taken.



Order of play

A Folder = Group

B File = Track

C Folder

Regarding MP3 and still pictures (JPEG/TIFF)

- Compatible formats: ISO9660 level 1 or 2 (except for extended formats) and Joliet
- Maximum number of files (tracks) and folders (groups) recognizable: 999 files (tracks) and 99 folders (groups)
- This unit is compatible with multi-session but reading or play of the disc may take time if there are a lot of sessions.
- Operation may take time to complete when there are many files (tracks) and/or folders (groups) and some files (tracks) may not display or be playable.
- The display order on this unit may differ from how the order is displayed on a computer.
- Depending on how you create the disc (writing software), files (tracks) and folders (groups) may not play in the order you numbered them.
- This unit is not compatible with packet-write format.
- Depending on the recording, some items may not be playable.

Regarding MP3

- File format: MP3

Files must have the extension ".mp3" or ".MP3".

- Bit rates: 32 kbps to 320 kbps

- Sampling frequency: 16 kHz/22.05 kHz/24 kHz/32 kHz/44.1 kHz/48 kHz

- This unit is not compatible with ID3 tags.

Regarding still pictures (JPEG/TIFF)

- File format: JPEG, TIFF (non-compressed RGB chunky format)

Files must have the extension ".jpg", ".JPG", ".tif" and ".TIF".

- Number of pixels: 34 × 34 to 6144 × 4096

(Sub sampling is 4:2:2 or 4:2:0)

- Operation may take time to complete when playing TIFF format still pictures.

- MOTION JPEG is not supported.

Using menus to play MP3 discs

CD

The unit plays MP3 files recorded on CD-R/RW designed for audio recording that are finalized (→ 64) on a computer. Files are treated as tracks and folders are treated as groups.

1 During stop or play

Press [TOP MENU].

- The file list appears.

Selected Group No. and Name

G:

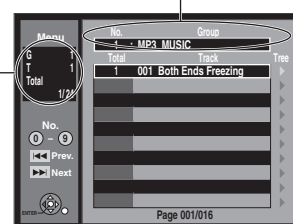
The Group Number

T:

Track Number in the Group

Total:

Selected Track Number/
Total Track Number



2 Press [▲, ▼] to select the track and press [ENTER].

- Play starts on the selected track.
- "□" indicates the track currently playing.
- You can also directly select the track with the numeric buttons.

e.g.: "6": [0] → [0] → [6]

"10": [0] → [1] → [0]

■ Using the tree screen to find a group (→ 24)

■ To show other groups

Press [◀] (Prev.) or [▶] (Next) to show other pages.

- After listing all the tracks in one group, the list for the next group appears.

■ To exit the file list

Press [TOP MENU] or [RETURN].



-
- The screenshot shows the MP3 player's interface. On the left is the 'Menu' panel with options 'G' (selected), 'T' (1), and 'Total' (1/24). Below these are 'No.' (0) and a minus sign (-) button. At the bottom left is a 'REPEAT' button with a circular arrow icon. The main area is the 'Tree' panel, which displays a hierarchical list of music folders and files. The 'MP3_MUSIC' folder is selected and highlighted. Below it are several numbered folders and files, including '001 My favorite', '001 Brazilian pops', '002 Chinese pops', '003 Czech pops', '004 PC Files', '005 Japanese pops', '006 Swedish pops', '001 Momoko', '002 Standard Number', '001 Piano solo', and '002 Vocal'. A vertical slider is located between the 'Menu' and 'Tree' panels. In the top right corner, there is a status indicator 'G 1/15'.

- If the group has no track, “—” is displayed as group number.

- The file list for the selected group appears.

To show JPEG Menu

The diagram illustrates the menu navigation process. It begins with a 'FUNCTIONS' screen where 'DVD' is selected. Pressing the 'MENU' button leads to a 'Menu' screen. The 'Menu' screen prompts the user to 'Select a playback mode from the following menus.' and offers two options: 'MP3 Menu' and 'JPEG Menu'.

Press [TOP MENU].

The screenshot shows the camera's LCD screen in 'Picture (JPEG) View' mode. At the top, the text 'JPEG Menu' and 'Picture (JPEG) View' are visible. Below this, a status bar shows 'CD (JPEG)', 'Folder', and the date '08 8 10/27 Mon'. The main display area contains a 3x3 grid of image thumbnails labeled 001 through 009. Each thumbnail shows a different scene, mostly featuring a person in a white shirt. Navigation buttons at the bottom include 'Previous', 'Page 01/01', and 'Next'. A 'Play' button with a play icon is located in the bottom left corner.

3/24 10:15 PM	
Date 3/23/2005	No. 100/123

Shooting Date

JPEG Menu **Select Folder**

CD (JPEG)

12_02_2005

image001

image002

image003

image004

image005

image006

image007

ENTER

Recording TV programs

Recording procedures

RAM -R -RW(V) +R

- You can record up to 99 titles on a disc (49 titles **+R**).
- It is not possible to record digital broadcasts that allow "One time only recording" onto DVD-R, DVD-RW, +R or 8 cm (3") DVD-RAM discs. Use a CPRM compatible DVD-RAM.
- Recording will take place on open space on the disc. Data will not be overwritten.
- If there is no space left on the recording disc, you will need to erase unwanted titles (→ 22, 33) or use a new disc.

When recording to DVD-R, DVD-RW (DVD-Video format) or +R

- When recording MTS broadcasts
 - If you do not connect a cable TV box
 - Select "Main" or "SAP" in "Select MTS" in the SETUP menu (→ 44).
 - If you connect a cable TV box
 - Select "Main" or "SAP" on the cable TV box.
- The aspect ratio of the recorded image will be 4:3.
- In order to play a DVD-R, DVD-RW (DVD-Video format) or +R recorded using this unit on another playback source, the disc must first be finalized (→ 31).

Preparation

- Release protection (disc → 30, cartridge → 30). **RAM**
- Select an audio type you want to record. (→ right below)
- Press [DVD].

1 Press [⏻, DVD/VHS POWER] to turn the unit on.

2 Insert a disc. (→ 8)

- When using a DVD-RAM for the first time with the unit, format it to ensure accurate recording (→ 31, "Format Disc").

3 Press [CH, ▲, ▼] to select the channel.

To select with the numeric buttons:

Antenna Mode

(Airwaves)

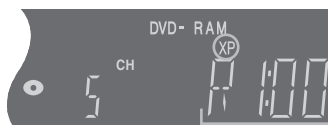
e.g., "5": [0]→[5]
"15": [1]→[5]

CableTV Mode (Cable)

e.g., "5": [0]→[0]→[5]
"15": [0]→[1]→[5]
"115": [1]→[1]→[5]



4 Press [REC MODE] to select the recording mode (XP, SP, LP or EP).



Remaining time on the disc

5 Press [●, REC] to start recording.

- You cannot change the channel or recording mode during recording. You can change them while recording is paused, but the material is recorded as a separate title.



To pause recording

Press [⏏, PAUSE]. (Press again to restart recording.)

• Title is not split into separate titles.

• You can also press [●, REC] to restart recording.

To stop recording

Press [■, STOP].

• Recorded as 1 title until the position where stopped.

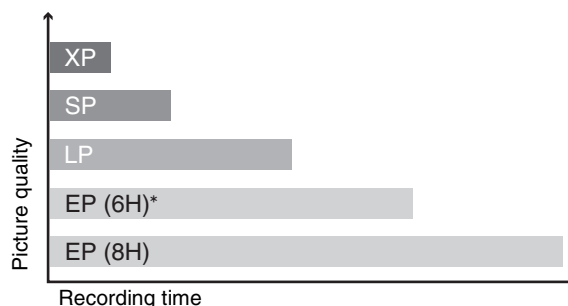
• It takes about 30 seconds for the unit to complete recording management information after recording finishes. **-R -RW(V) +R**

Recording modes and approximate recording times

(Unit: hour)

	DVD-RAM		DVD-R DVD-RW +R (4.7 GB)
	Single-sided (4.7 GB)	Double-sided (9.4 GB)	
XP (High quality)	1	2	1
SP (Normal)	2	4	2
LP (Long play)	4	8	4
EP (Extra long play)	8 (6*)	16 (12*)	8 (6*)

- Depending on the content being recorded, the recording times may become shorter than indicated.



* When "Recording Time in EP Mode" has been set to "EP (6H)" in the SETUP menu. (→ 43)

The sound quality is lower compared to other recording modes when using "EP (8H)".

Note

When recording to DVD-RAM using EP (8H) mode, play may not be possible on DVD players that are compatible with DVD-RAM. In this case use EP (6H) mode.

FR (Flexible Recording mode→ 26):

- You can set FR mode when transferring (dubbing) or programming scheduled recordings.

Selecting audio to record

RAM

Preparation

- Press [DVD].

Press [AUDIO].

Stereo → SAP → Mono

Stereo:	Main audio (stereo). If the broadcast is "Mono+SAP", audio will be monaural even if you select Stereo mode.
SAP:	Secondary audio program (SAP). If recorded in SAP, main audio is also recorded.
Mono:	Main audio (monaural). Select "Mono" if reception is poor during a stereo broadcast.

e.g., "Stereo" is selected.

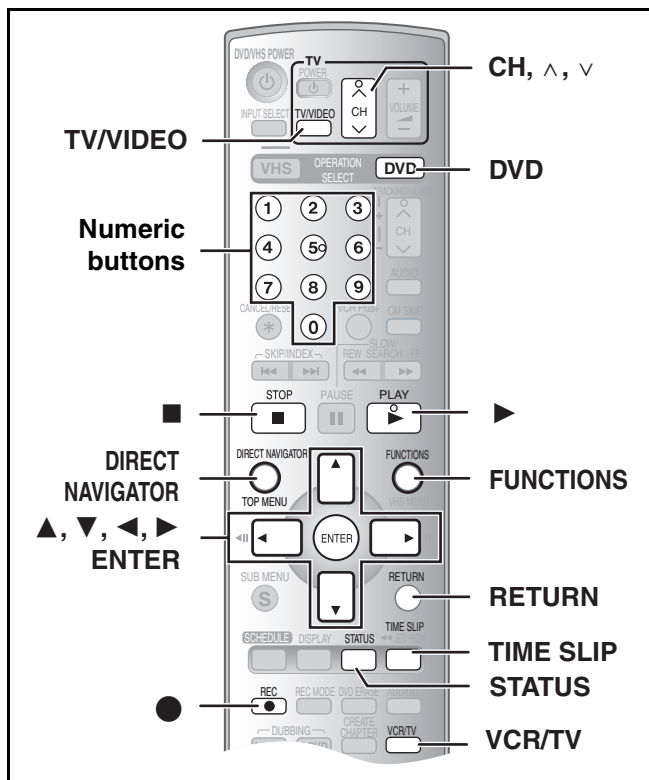
"(" appears when the unit is receiving the audio type you selected.



- If you change the sound setting while recording, the recorded sound will also change.

-R -RW(V) +R

Select the audio (Main or SAP) in "Select MTS" in the SETUP menu. (→ 44)



Preparation

- Press [DVD].

Specifying the time when recording will stop

While recording

Press [●, REC] to select the recording time.

- On the main unit, press [●, REC] on the DVD.

The unit's display

Each time you press the button:

Counter (Cancel) → OFF 0:30 → OFF 1:00 → OFF 1:30
 OFF 4:00 ← OFF 3:00 ← OFF 2:00 ←

For your reference

- This does not work during scheduled recording or Flexible Recording.
- Recording stops and the set time is cleared if you press [■, STOP].
- The set time is cleared if you change the recording mode or channel while recording is paused.

Watching the TV while recording

Preparation

- Connection (without Audio/Video cable)
 - Make sure that the TV indicator is lit on the unit's display. If it is not lit, press [VCR/TV] to light it.
- Connection (with Audio/Video cable)
 - Press [TV/VIDEO] to change the input mode to "TV".

Press TV's [CH, ^, v] to select the desired TV channel.

For your reference

- You can also do this if the unit is making a scheduled recording.
- The recording is unaffected.

Flexible Recording mode (FR)

RAM -R -RW(V) +R

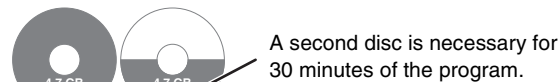
The unit calculates a recording rate that enables the recording to fit in the time you set (within the remaining time on the disc) with the best picture quality.

Using "FLEXIBLE RECORDING" is convenient in these kind of situations.

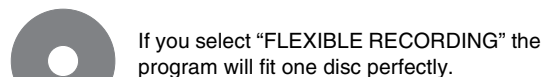
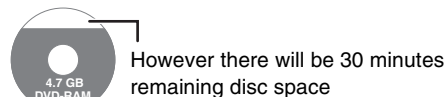
- When the amount of free space on the disc makes selecting an appropriate recording more difficult
- When you want to record a long program with the best picture quality possible

e.g., Recording a 90 minute program to disc

If you select XP mode, the program will not fit one disc.



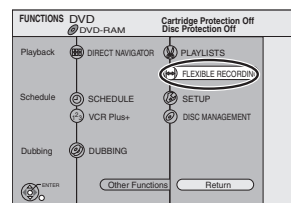
If you select SP mode, the program will fit one disc.



Preparation

- Press [DVD].
- Select the channel to record.

- 1 While stopped**
Press [FUNCTIONS].
- 2 Select "Other Functions" with [▲, ▼] and press [ENTER].**
- 3 Select "FLEXIBLE RECORDING" with [▲, ▼] and press [ENTER].**
- 4 Press [▲, ▼, ◀, ▶] to set the recording time.**
 - You can also set the recording time with the numeric buttons.
 - Maximum recording time is 8 hours.
- 5 Select "Start" with [▲, ▼, ◀, ▶] and press [ENTER].**
 - Recording starts.



To exit the FLEXIBLE RECORDING window without recording

Press [RETURN].

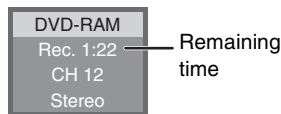
To stop recording in the middle

Press [■, STOP].

To show the time remaining until recording finishes

Press [STATUS].

- It is displayed in units of minutes.



For your reference

- During a Flexible Recording, all recording mode indicators light up on the unit's display.
- It is not possible to change the channel or recording mode while Flexible Recording is paused.

Playing while you are recording

RAM

Preparation

- Press [DVD].

Hint

- Sound is not output while fast-forwarding.

Chasing play

You can start play from the beginning of the title while continuing to record it.

While recording or scheduled recording

Press [▶, PLAY].

- Play starts while recording proceeds.

For your reference

- Play cannot be started until at least 2 seconds after recording starts.

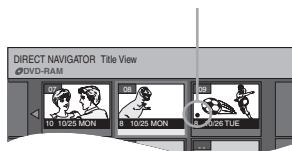
Simultaneous recording and play

You can play a title previously recorded while you are recording another title.

1 While recording or scheduled recording

Press [DIRECT NAVIGATOR]. (→ 33)

- : Currently recording



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

- Play starts while recording proceeds.

■ To exit the Direct Navigator screen

Press [DIRECT NAVIGATOR].

For your reference

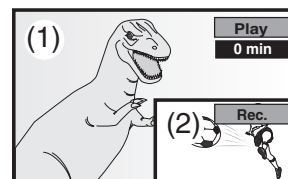
- During simultaneous recording and play, you cannot edit or erase titles with the Direct Navigator or playlists.
- Even if you start play while the unit is on standby for scheduled recording, recording starts when the time you set is reached.

TIME SLIP

Press [TIME SLIP] while recording; play starts from 30 seconds previous to that moment. You can start play from even earlier by specifying an amount of time to skip on the time indicator.

1 While recording or scheduled recording Press [TIME SLIP].

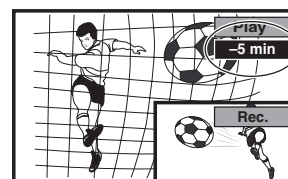
- The PIP screen (images being currently recorded) is displayed.
- On the main screen, play starts from 30 seconds previous to that moment.
- You will hear the playback audio.



- (1) Play images (30 seconds before)
- (2) Currently recording

2 While observing the time indicator at the top right Press [▲, ▼] to set an amount of time to skip and press [ENTER].

- Play skips the amount of time you specified.
- The time indicator will go off after about 5 seconds, but will turn on again when you set the time.
- Press [▲, ▼] to alter in 1-minute units. Press and hold [▲, ▼] to alter in 10-minute units.



■ To show the play images in full

Press [TIME SLIP].

- Press [TIME SLIP] to return to the PIP screen.

For your reference

- The image on the PIP screen may be distorted or flicker depending on the scene. However, this does not affect the image recorded.

To stop play and recording

1 Press [■, STOP]. Play stops. (Wait 2 or more seconds.)

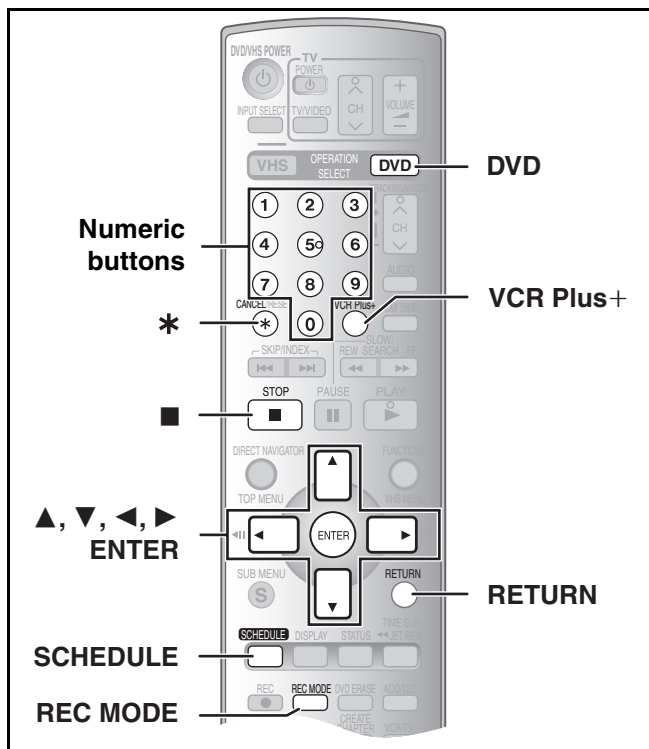
2 Press [■, STOP]. Recording stops.

- You cannot stop recording with [■, STOP] during scheduled recording. To stop scheduled recording, press [■, STOP], then [ENTER] within 5 seconds.
- You can also press and hold [■] on the main unit for 3 or more seconds to stop scheduled recording.

Playing/Recording VHS while recording

You can play or record tapes while recording. The recording will not be affected.

- VHS playback (→ 49)
- VHS recording (→ 51)
 - When a tuner channel is being recorded on DVD, you can only record the same channel on VHS.



RAM -R -RW(V) +R

Preparation

- Press [DVD].

Cautions for using scheduled recording on DVD and VHS

■ Scheduled recording automatically starts at the set time.

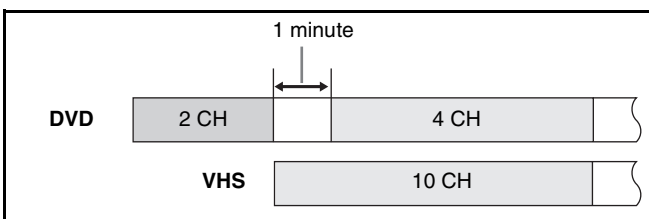
- Scheduled recording can be started whether the unit is turned on or off. When the unit is turned off, the sound and the video cannot be outputted to the TV.

■ Scheduled recording for TV programs cannot be executed on both DVD and VHS at the same time.

Make sure the scheduled recording start times do not overlap on both DVD (→ 29) and VHS (→ 53) Scheduled Recording List screens.

When the scheduled recording settings overlap:

- When the start time of both scheduled recordings is the same, the scheduled recording of DVD has priority.
- When the same tuner channels are specified in scheduled recordings on both DVD and VHS, only one scheduled recording can be started.
- When the interval between the first scheduled recording and the second scheduled recording on DVD is 1 minute or less as shown below, the second scheduled recording on DVD has priority over the scheduled recording on VHS even if its start time is later than the scheduled recording on VHS.



When the scheduled recording settings of DVD and VHS are overlapped, the setting of DVD takes priority.

- “⊖” lights on the unit’s display of both sides in the standby mode. When the recording starts, “⊖” on the recording side (DVD side) remains lit and the “⊖” on the other side (VHS side) starts flashing.

Scheduled Recording

You can enter up to 16 programs a month in advance.

Preparation

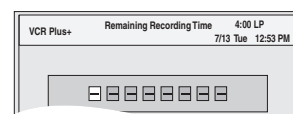
- Release protection (disc → 30, cartridge → 30) **RAM**.
- Insert a disc (→ 8) and confirm there is sufficient empty space for recording on it (→ 47).
- Check that the clock is set to the correct time.
- Press [DVD].

■ Using VCR Plus+ system

Entering the PlusCode® numbers is an easy way of scheduled recording. You can find these codes in TV listings in newspapers and magazines.

- When connecting a cable TV box or satellite receiver, the VCR Plus+ system does not work. Program the scheduled recording manually (→ 29).

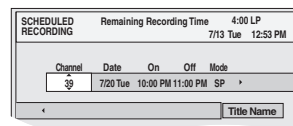
1 Press [VCR Plus+].



2 Press the numeric buttons to enter the PlusCode number.

- Press [◀] to move back to correct a digit.

3 Press [ENTER].



- Confirm the program and correct it if necessary using [▲, ▼, ◀, ▶] (“Manual programming” → 29, step 2).
- When “XP” is displayed in the unit’s display, the recording mode automatically changes to “FR” in order to prevent loss of recording when there is not enough space. Change to “XP” mode if you want to set scheduled recording using “XP” mode.
- “Invalid Entry” is displayed when you enter the wrong PlusCode number. Reenter the PlusCode number.
- **To enter the name of the program**
Press [◀, ▶] to select “Title Name” and press [ENTER] (→ 32).

4 If the program is correct

Press [ENTER].

- “⊖” lights on the unit’s display.
- Make sure that the scheduled recording has been programmed correctly on the SCHEDULED LIST screen (→ 29).
- Repeat steps 1–4 to program other recordings.

5 Press [RETURN].

■ To stop recording while a program is working

Press [■, STOP], then [ENTER] within 5 seconds.

- You can also press and hold [■] on the DVD of the main unit for 3 or more seconds to stop recording.

Note

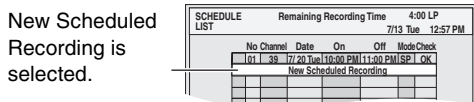
Refer to Note in Manual programming (→ 29).

Manual programming

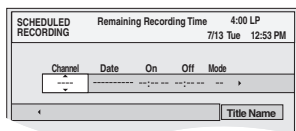
- When connecting a cable TV box or satellite receiver, select the channel on the cable TV box or satellite receiver before scheduled recording starts.

1 Press [SCHEDULE].

- Make sure "New Scheduled Recording" is selected.



2 Press [ENTER] to move and change the items using [▲, ▼, ◀, ▶].



- You may use the numeric buttons to enter "Channel", "Date", "On", and "Off".

Channel (Program Position/TV Station Name)

Date

You can also make a daily or weekly program. Each daily or weekly program is counted as one program.

On (start time)/Off (finish time)

The time increases or decreases in 30-minute increments if you hold down the button.

Mode (Recording mode)

You can also press [REC MODE] to change the recording mode.

XP↔SP↔LP↔EP↔FR↔XP... (→ 25)

Title Name

Press [◀, ▶] to select "Title Name" and press [ENTER] (→ 32).

3 Press [ENTER] when you have finished making changes.

- "⊖" lights on the unit's display.
- "Invalid Entry" is displayed when you enter the wrong item. Reenter the item.
- Make sure that the scheduled recording has been programmed correctly on the SCHEDULE LIST screen (→ right).
- To continue programming: Select "New Scheduled Recording" and repeat steps 2–3.

4 Press [RETURN].

To stop recording while a program is working

Press [■, STOP], then press [ENTER] within 5 seconds.

- You can also press and hold [■] on the DVD of the main unit for 3 or more seconds to stop recording.

Note

- When the unit is carrying out a scheduled recording, you may utilize playback.
- When the disc is not inserted, the disc is full or a non-recordable disc is inserted, the warning message appears because scheduled recording is disabled.
- "⊖" flashes when the unit cannot perform scheduled recording (non-recordable disc or protected disc, etc.). Check the disc carefully.
- The actual time recorded may be longer than the program itself when TV programs are recorded using VCR Plus+ system.
- When recording more than one program in a row, for DVD-RAM the first few seconds, and for DVD-R, DVD-RW (DVD-Video format) or +R about the first 30 seconds of all programs from the second one onwards will not be recorded.
- If you set "DST" (Daylight Saving Time) to "ON" when manually setting the clock (→ 46), scheduled recording may not work when summer switches to winter and vice versa.

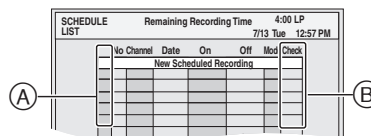
Check, change or delete programs

Even when the unit is turned off, you can display the scheduled recording list by pressing [SCHEDULE].

Preparation

- Press [DVD].

1 Press [SCHEDULE].



Icon explanations (A)

- Currently recording
- Programs are overlapped. Recording of the program with the later start time starts when the earlier program finishes recording.
- You stopped a weekly or daily scheduled recording. The icon disappears when the next scheduled recording starts.
- The disc was full. (not enough space)
- The TV program may not be recorded due to copy-protect.
- Recording stopped (Dirty disc, etc.)

Check (B)

OK: Recordable

→ (Date): The last day of daily or weekly recording.

! : It may not be possible to record because:

- the disc is write-protected
- there is no more space left
- the number of possible titles has reached its maximum.

2 Press [▲, ▼] to select the program.

- You may also select program by inputting a 2-digit number using the numeric buttons.

e.g.: "5": [0]→[5]

"15": [1]→[5]

- Press [◀, ▶] to move to the preceding or following page.

3 Press [CANCEL/RESET, *] to delete,

You cannot delete programs that are currently recording.

or press [ENTER] to change.

The scheduled recording setting screen appears.

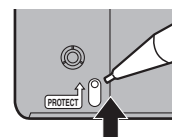
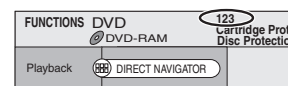
4 If you pressed [ENTER] in step 3,

Use [▲, ▼, ◀, ▶] to change and press [ENTER].

5 Press [RETURN].

For your reference

- Programs that failed to record are not deleted from the list immediately (indicated in gray), but are deleted from the list automatically at 4 a.m. 2 days later.
- During scheduled recording, you can change the end time as long as the recording mode is not "FR".



► Format Disc

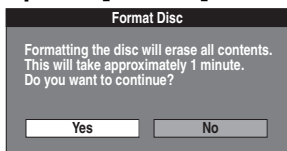
RAM -RW(V) -RW(VR)

- Follow steps 1 to 3 of “DISC MANAGEMENT”.

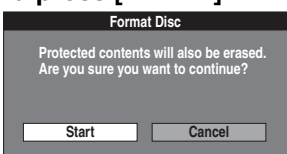
Formatting erases all contents (including computer data), and they cannot be restored. Check carefully before proceeding.
The contents are erased when you format a disc even if you have set protection.

- 4 Select “Format disc” with [▲, ▼] and press [ENTER].
- 5 Select “Yes” with [◀] and press [ENTER].

e.g., DVD-RAM



- 6 Select “Start” with [◀] and press [ENTER].



- Formatting starts.
- A message appears when formatting is finished.

Note

- Formatting normally takes a few minutes; however it may take up to a maximum of 70 minutes (**RAM**).
- Do not disconnect the AC power supply cord while formatting. This can render the disc unusable.

- 7 Press [ENTER].

To stop formatting **RAM**

Press [RETURN].

- You can cancel formatting if it takes more than 2 minutes. The disc must be reformatted if you do this.

Note

- When a disc has been formatted using this unit, it may not be possible to use it on any other equipment.
- DVD-R, +R and CD-R/RW cannot be formatted.
- You can format DVD-RW only as DVD-Video format on this unit.
- The disc cannot be formatted if the write protect tab (→ 30) is switched to “PROTECT”. Release the protection to continue.
- The message “Unable to format” appears when trying to format discs the unit cannot use.

► Playback will start with:

-R -RW(V) +R

- Follow steps 1 to 3 of “DISC MANAGEMENT”.

Select whether to show the top menu after finalizing the disc. Do this before finalizing the disc.

- 4 Select “Playback will start with:” with [▲, ▼] and press [ENTER].
- 5 Use [▲, ▼] to select a desired item and press [ENTER].



- Top Menu: The top menu appears first.
- First Title: The disc content is played without displaying the top menu.

► Finalize

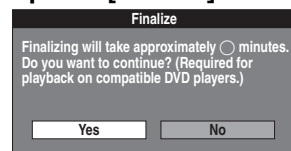
-R -RW(V) +R

- Follow steps 1 to 3 of “DISC MANAGEMENT”.
- Make selection from “Playback will start with:” before finalizing the disc. (→ below left)

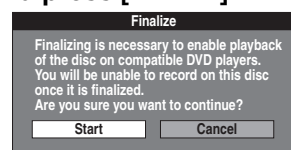
You can play DVD-R, DVD-RW (DVD-Video format) or +R on compatible DVD players by finalizing it on the unit, effectively making it into DVD-Video that complies with DVD-Video standards.

The menu you create with the unit can also be used on DVD players.

- 4 Select “Finalize” with [▲, ▼] and press [ENTER].
- 5 Select “Yes” with [◀] and press [ENTER].



- 6 Select “Start” with [◀] and press [ENTER].



- Finalizing starts.
- You cannot cancel finalizing.
- A message appears when finalizing is finished.

Note

- Finalizing takes about 15 minutes.
- Do not disconnect the AC power supply cord while finalizing. This can render the disc unusable.

- 7 Press [ENTER].

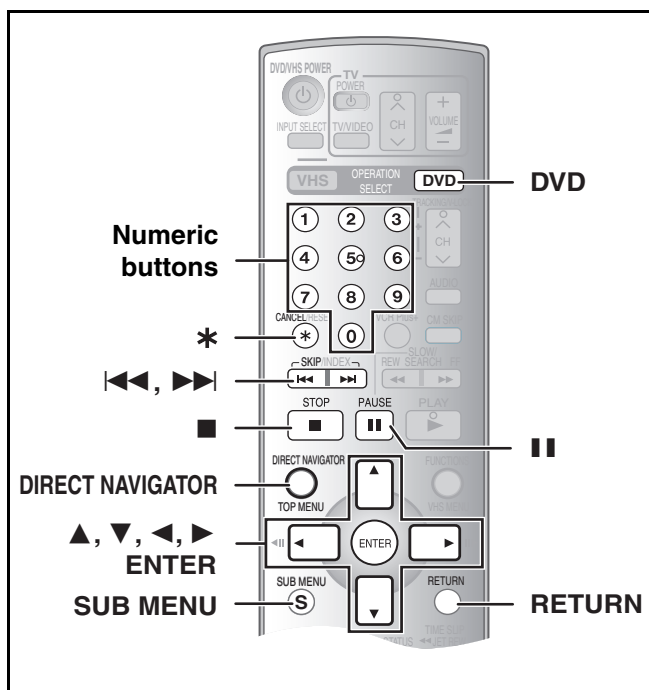
Note

- You can only finalize DVD-R, DVD-RW (DVD-Video format) or +R that were recorded on the unit.
- When finalizing a high-speed recording compatible disc, it may take longer than displayed on the confirmation screen (approximately 4 times).
- After finalizing
 - The disc becomes play-only and you can no longer record or edit it. **-R +R**
 - You can record and edit the disc after formatting (→ left) although it becomes play-only after finalizing. **-RW(V)**
 - DVD-R, DVD-RW (DVD-Video format) or +R finalized on the unit may not be playable on other players depending on the condition of the recording.
 - There is a pause of several seconds between titles and chapters during play.
 - Titles are divided into about 5-minute chapters*.
- * This time varies greatly depending on the condition and mode of recording.

- Visit Panasonic's homepage for more information about DVDs.

For U.S.A.: <http://www.panasonic.com/playDVD-R>

For Canada: <http://www.panasonic.ca>



Entering text

RAM -R -RW(V) +R

You can give names to recorded titles, etc.

The maximum number of characters:

RAM	Characters
• Title	64
• Title (scheduled recording)	44
• Playlist	64
• Disc	64

-R -RW(V) +R

	Characters
• Title	44
• Disc	40

Note

- If a name is long, only part of it is displayed on the title list (→ 33) and the playlist screen (→ 37).

Preparation

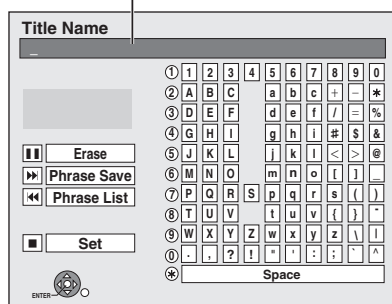
- Insert a recorded disc.
- Release protection (Disc → 30, title → 34, cartridge → 30). **RAM**
- Press [DVD].

1 Show Enter Name screen.

Refer to the following pages regarding display of the Enter Name Screen.

- Title (→ 34)
- Title (scheduled recording) (→ 28, 29)
- Disc (→ 30)
- Playlist (→ 38)

Name field: shows the text you have entered



2 Use [▲, ▼, ◀, ▶] to select the character you want to enter and press [ENTER].

Repeat this step to enter other characters.

• To erase a character

Press [▲, ▼, ◀, ▶] to select the character in the name field and press [■, PAUSE].

• Using the numeric buttons to enter characters

e.g., entering the letter "R".

- (1) Press [7] to move to the 7th row.
- (2) Press [7] twice to highlight "R".
- (3) Press [ENTER].



• To enter space

Press [CANCEL/RESET, *] and press [ENTER].

• Save/recall phrased (→ below)

3 After you have finished naming

Press [■, STOP].

The title is entered and the screen disappears.

■ To cancel in the middle

Press [RETURN].

- Characters will not be saved.

■ To save phrases

You can save frequently used phrases and recall them later.

Maximum number of saved phrases: 20

Maximum number of characters per phrase: 20

• After entering the phrase (step 1–2, "Entering text")

- 1 Press [▲, ▼, ◀, ▶] to select "Phrase Save" and press [ENTER].

• You can also press [▶▶, SKIP] to select "Phrase Save".

- 2 Press [◀, ▶] to select "Save" and press [ENTER].

• Press [RETURN] to cancel.

■ To recall a saved phrases

- 1 Press [▲, ▼, ◀, ▶] to select "Phrase List" and press [ENTER].

• You can also press [◀◀, SKIP] to select "Phrase List".

- 2 Press [▲, ▼, ◀, ▶] to select the phrase to be recalled and press [ENTER].

■ To erase saved phrases

- 1 Press [▲, ▼, ◀, ▶] to select "Phrase List" and press [ENTER].

• You can also press [◀◀, SKIP] to select "Phrase List".

- 2 Press [▲, ▼, ◀, ▶] to select the phrase to be erased.

- 3 Press [SUB MENU] to show "Erase Phrase" and press [ENTER].

- 4 Press [◀, ▶] to select "Erase" and press [ENTER].

- 5 Press [RETURN].

For your reference

If you enter a long name, only part of it is shown in the TOP MENU after finalization (→ 31). When entering a title name, the name that will appear in the TOP MENU can be previewed in "Top Menu Preview (Finalized Disc)" window. **-R -RW(V) +R**



Using the Direct Navigator

RAM -R -RW(V) +R -RW(VR)

Press [DIRECT NAVIGATOR] and the list of titles recorded (Title View) is shown. You can play and edit a desired title.

For your reference

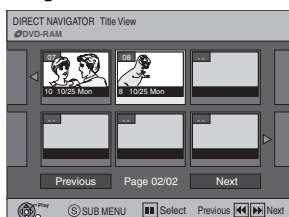
- You cannot edit during recording or transferring (dubbing), etc.
- The maximum number of items on a disc:
 - Title: 99 (+R) 49 titles
 - Chapter: Approximately 1000 (+R) Approximately 254 (Depends on the state of recording.)

■ Selecting recorded titles to play

Preparation

- Insert a disc that has been recorded on.
- Press [DVD].

1 Press [DIRECT NAVIGATOR].



2 Use [▲, ▼, ◀, ▶] to select the title you want to watch and press [ENTER].

- Play starts.
- You can also select titles by entering a 2-digit number with the numeric buttons.
 - e.g.: "5": [0]→[5]
 - "15": [1]→[5]
- If you enter a number larger than the total number of titles, the last title is selected.
- "To show other pages" → lower right

■ To clear the title list

Press [RETURN].

For your reference

- Direct Navigator screen icons
 - 🔒 : Title protected
 - 🔒: Copy-protected so it was not recorded.
 - x: Unable to play
 - : Currently recording
 - 🔒: Title with "One time only recording" restriction (→ 64, CPRM)

■ Editing titles with SUB MENU button

Note

- Once erased, divided or shortened, the title cannot be restored to its original state. Make certain before proceeding.

Preparation

- Release protection (disc → 30, cartridge → 30). **RAM**
- Press [DVD].

1 Press [DIRECT NAVIGATOR].

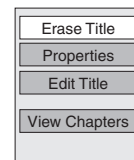
2 Use [▲, ▼, ◀, ▶] to select a desired title.

- "To show other pages", → below

3 Press [SUB MENU].

4 Use [▲, ▼] to select a desired item and press [ENTER].

- After this operation, follow the desired operation.



■ To stop in the middle

Press [RETURN].

For your reference

- When the title is protected (→ 34), some items are not accessible. Release the protection to access the inaccessible items. **RAM**

▶ Erase Title

RAM -R -RW(V) +R (Multiple editing is possible. → below)

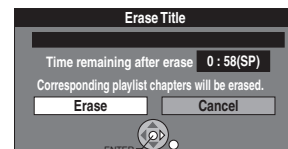
- Follow steps 1 to 3 of "Editing titles with SUB MENU button".

Once title is erased using this procedure, it cannot be retrieved.

Check the title carefully before erasing to ensure it isn't one you want to keep.

4 Select "Erase title" with [▲, ▼] and press [ENTER].

5 Select "Erase" with [◀] and press [ENTER].



For your reference

- The disc's available recording time may not increase after erasing short titles.
- The available recording space on DVD-R or +R does not increase when you erase titles.
- Available recording space on a DVD-RW (DVD-Video format) increases only when the last recorded title is erased. It does not increase if other title are erased.

▶ Properties

RAM -R -RW(V) +R -RW(VR)

- Follow steps 1 to 3 of "Editing titles with SUB MENU button".

Title information (e.g., date and time) is shown.

4 Select "Properties" with [▲, ▼] and press [ENTER].



Various operations

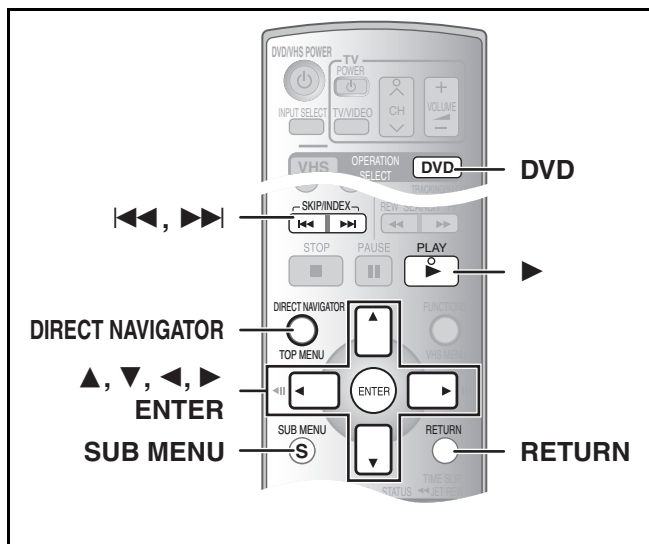
■ To show other pages

Press [▲, ▼, ◀, ▶] to select "Previous" or "Next" and press [ENTER].

- You can also press [◀◀], SKIP or [▶▶], SKIP to show other pages.

■ Multiple editing

Select with [▲, ▼, ◀, ▶] and press [⏏, PAUSE]. (Repeat) A check mark appears. Press [⏏, PAUSE] again to cancel.



▶ Edit Title

You can perform various kinds of title editing.

Preparation

- Release protection (disc → 30, cartridge → 30). **RAM**
- Press [DVD].

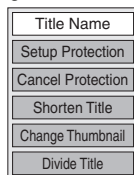
- 1 Press [DIRECT NAVIGATOR] and use [▲, ▼, ◀, ▶] to select a desired title.
 - "To show other pages" → 33
 - "Multiple editing" → 33

- 2 Press [SUB MENU].

e.g.: DVD-RAM

- 3 Select "Edit Title" with [▲, ▼] and press [ENTER].

- 4 Use [▲, ▼] to select a desired item and press [ENTER].
 - The editing screen for the selected item appears.



■ To return to the previous screen

Press [RETURN].

■ To exit the screen

Press [RETURN].

▶▶ Title Name

RAM -R -RW(V) +R

- Follow steps 1 to 3 of "Edit Title".

- 4 Select "Title Name" with [▲, ▼] and press [ENTER].

Refer to "Entering text". (→ 32)

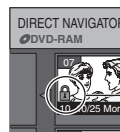
▶▶ Setup Protection/Cancel Protection

RAM (Multiple editing → 33)

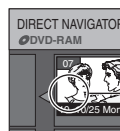
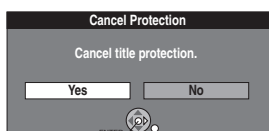
- Follow steps 1 to 3 of "Edit Title".

You can prevent accidental erasure of titles by setting and canceling the write-protection.

- 4 Select "Setup Protection" or "Cancel Protection" with [▲, ▼] and press [ENTER].
- 5 Select "Yes" with [◀] and press [ENTER].



Set up Protection:
The padlock mark appears.



Cancel Protection:
The padlock mark disappears.

For your reference

Titles will be erased even if they are protected if you format the disc with DISC MANAGEMENT (→ 31).

▶▶ Shorten Title

RAM

- Follow steps 1 to 3 of "Edit Title".

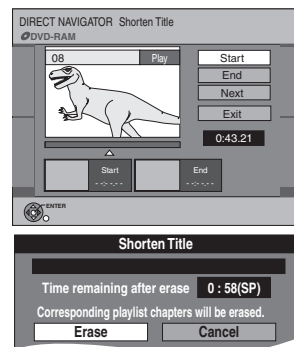
You can remove unnecessary parts of the title such as commercials.

- 4 Select "Shorten Title" with [▲, ▼] and press [ENTER].

- 5 Press [ENTER] at the start point and end point of the section you want to erase. (→ 35, "For quicker editing")

- 6 Select "Exit" with [▲, ▼] and press [ENTER].

- 7 Select "Erase" with [◀] and press [ENTER].



■ To erase another part of the same title

After setting the point in "Start" and "End", select "Next" in step 5 and perform step 7, then repeat steps 5–7.

For your reference

- You may not be able to specify start and end points within 3 seconds of each other.
- The disc's available recording time may not increase after erasing short parts of titles.

▶▶ Change Thumbnail

RAM -R -RW(V) +R

- Follow steps 1 to 3 of "Edit Title".

You can change the image to be shown as a thumbnail picture in the Title View.

- 4 Select "Change Thumbnail" with [▲, ▼] and press [ENTER].

- 5 Press [▶, PLAY] to play.

- 6 Press [ENTER] at the point you want to display.

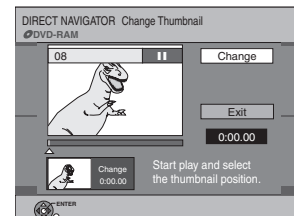
(→ 35, "For quicker editing")

- To change to another point in the same title:

- Select "Change" with [▲, ▼] and press [▶, PLAY] and then repeat step 6.

- 7 Select "Exit" with [▲, ▼] and press [ENTER].

- The thumbnail picture will be changed at this point.



▶▶ Divide Title

RAM

- Follow steps 1 to 3 of “Edit Title”.

You can divide a selected title into two. You must be careful when dividing a title because it cannot be recovered after the procedure.

- 4 Select “Divide Title” with [▲, ▼] and press [ENTER].

- 5 Press [ENTER] at the point you want to divide the title.

(→ lower right, “For quicker editing”)

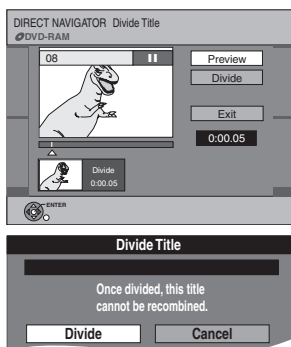
- To change the point to divide:

- Select “Divide” with [▲, ▼] and press [▶, PLAY], and then repeat steps 5–7.

- 6 Select “Exit” with [▲, ▼] and press [ENTER].

- 7 Select “Divide” with [◀] and press [ENTER].

- The title is divided at that point.



■ To check the division point

By selecting “Preview” in step 5 and pressing [ENTER], play will begin from 10 seconds prior to the division point to 10 seconds after the division point.

For your reference

- The divided titles retain the name of the original title. They also retain the CPRM property (→ 64) of the original.
- Video and audio just before and after the division point will be momentarily cut out.
- It is not possible to carry out “Divide” in the following cases:
 - When the resulting part(s) are extremely short.
 - When the total number of titles is more than 99.

▶ View Chapters

RAM -R -RW(V) +R

- 1 Press [DIRECT NAVIGATOR] and use [▲, ▼, ◀, ▶] to select a desired title.

- “To show other pages” → 33

- 2 Press [SUB MENU].

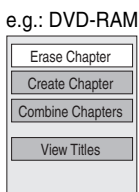
- 3 Select “View Chapters” with [▲, ▼] and press [ENTER].

- 4 Select a desired chapter with [▲, ▼, ◀, ▶].

- To start play → Press [ENTER].
- To edit → Follow the steps below.

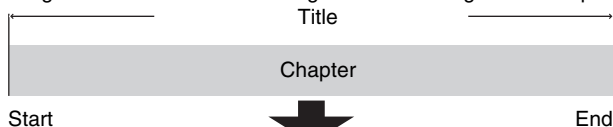
- 5 Press [SUB MENU].

- 6 Select a desired item with [▲, ▼] and press [ENTER].



Title/Chapter

Programs are recorded as a single title consisting of one chapter.



You can divide a title into multiple chapters. **RAM**
(→ 22, “Create chapters”, → right “Create Chapter”)



- You can change the order of chapters and create a playlist.

RAM

- Titles are divided into chapters about 5 minutes after finalizing (→ 31). -R -RW(V) +R

▶▶ Erase Chapter

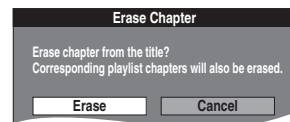
RAM (Multiple editing → 33)

- Follow steps 1 to 5 of “View Chapters”.

Once erased, the recorded contents are lost and cannot be restored. Make certain before proceeding.

- 6 Select “Erase Chapter” with [▲, ▼] and press [ENTER].

- 7 Select “Erase” with [◀] and press [ENTER].



▶▶ Create Chapter

RAM

- Follow steps 1 to 5 of “View Chapters”.

- 6 Select “Create Chapter” with [▲, ▼] and press [ENTER].

- 7 Press [ENTER] at the point you want to divide.

(→ below, “For quicker editing”)

- Repeat this step to divide at other points.



- 8 Select “Exit” with [▼] and press [ENTER].

Note

- A short portion of the recording just after the creation point may be lost.

For your reference

- The divided titles retain the name of the original title. They also retain the CPRM property (→ 64) of the original.
- It is not possible to carry out “Create” when the resulting part(s) are extremely short.

▶▶ Combine Chapters

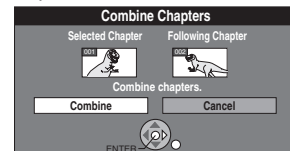
RAM

- Follow steps 1 to 5 of “View Chapters”.

- 6 Select “Combine Chapters” with [▲, ▼] and press [ENTER].

- 7 Select “Combine” with [◀] and press [ENTER].

- The selected chapter and next chapter are combined.



▶▶ View Titles

RAM -R -RW(V) +R -RW(VR)

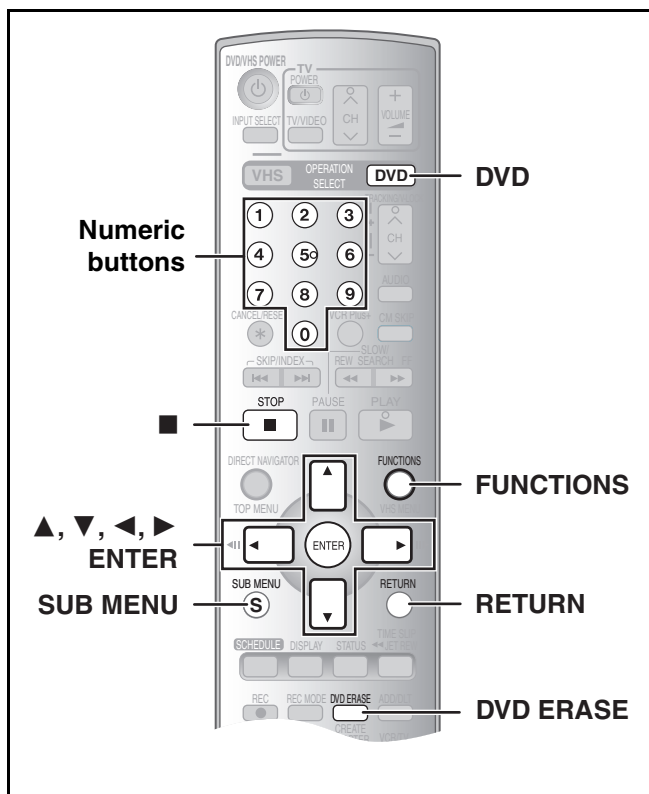
- Follow steps 1 to 5 of “View Chapters”.

- 6 Select “View Titles” with [▲, ▼] and press [ENTER].

You go back to Title View.

For quicker editing

- Use search (→ 21), Time Slip (→ 22) or slow-motion (→ 21) to find the desired point.
- Press [I◀◀, SKIP] or [▶▶I, SKIP] to skip to the end of a title.

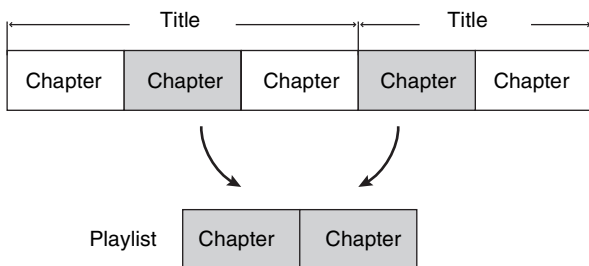


Using playlist

RAM

You can create a playlist by gathering your favorite chapters (→ 35) from your recordings. You can also play and edit the created playlist.

Playlist



- Editing playlists doesn't modify titles.
- Playlists are not recorded separately so this doesn't use much capacity.

- The maximum number of items on a disc:
 - Playlists: 99
 - Chapters in play lists: Approximately 1000 (Depends on the state of recording.)
- If you exceed the maximum numbers of items for a disc, all the items entered will not be recorded.

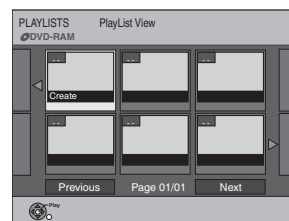
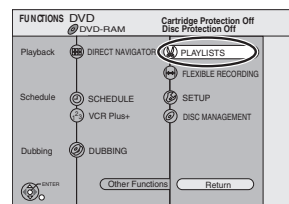
Creating playlists

RAM

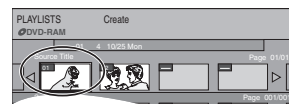
Preparation

- Release protection (disc → 30, cartridge → 30)
- Press [DVD].

- 1 While stopped Press [FUNCTIONS].
- 2 Select "Other Functions" with [▲, ▼] and press [ENTER].
- 3 Select "PLAYLISTS" with [▲, ▼] and press [ENTER].
 - The Playlist View appears.



- 4 Select "Create" with [▲, ▼, ◀, ▶] and press [ENTER].
- 5 Use [◀, ▶] to select the source title and press [▼].



- When you want to select all chapters in the title, use [◀, ▶] to select the source title and press [ENTER], then skip to step 7.
- Repeat steps 5–7 to add other titles or chapters.

- 6 Use [◀, ▶] to select the chapter you want to add to a playlist and press [ENTER].
 - Press [▲] to cancel.



- You can also create a new chapter in the source title. Press [SUB MENU] to select "Create Chapter" and press [ENTER] (→ 35, "Create Chapter").

- 7 Use [◀, ▶] to select the position to insert the chapter and press [ENTER].



- The chapter is registered in the playlist.
- Repeat steps 6–7 to add other chapters.
- To select other source titles, press [▲] several times to return to step 5.

- 8 Press [RETURN].

To return to the previous screen

Press [RETURN].

To exit the screen

Press [RETURN].

■ Playing playlists

RAM -RW(VR) (Play only)

Preparation

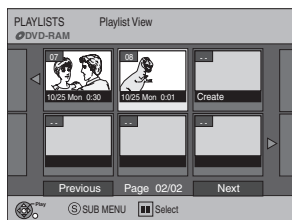
- Create playlists. (→ 36)
- Press [DVD].

1 While stopped

Press [FUNCTIONS].

2 Select “Other Functions” with [▲, ▼] and press [ENTER].

3 Select “PLAYLISTS” with [▲, ▼] and press [ENTER].



4 Use [▲, ▼, ◀, ▶] to select a playlist and press [ENTER].

- Chapters are not displayed if you have not yet created a playlist with the disc.
- You can also select a playlist from the Playlist View by entering a 2-digit number with the numeric buttons.
e.g.: “5”: [0]→[5]
“15”: [1]→[5]
- If you enter a number larger than the total number of playlists, the last playlist is selected.
- “To show other pages” → 33

■ To stop playlist play

Press [■, STOP]. (The Playlist View screen appears.)

■ To return to the previous screen

Press [RETURN].

■ To exit the screen

Press [RETURN].

■ To erase a playlist during play

1 Press [DVD ERASE].

- A confirmation message will be displayed.

2 Use [◀] to select “Erase” and press [ENTER].

For your reference

- You can use fast-forward, fast-rewind, pause, and slow-motion while playing chapters just as you can during normal play.

■ Using playlist to edit playlists/chapters

RAM -RW(VR) (Properties only)

Preparation

- Create playlists. (→ 36)
- Release protection (disc → 30, cartridge → 30). **RAM**
- Press [DVD].

1 While stopped

Press [FUNCTIONS].

2 Select “Other Functions” with [▲, ▼] and press [ENTER].

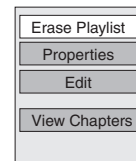
3 Select “PLAYLISTS” with [▲, ▼] and press [ENTER].

4 Use [▲, ▼, ◀, ▶] to select a playlist.

- “To show other pages” → 33

5 Press [SUB MENU].

6 Use [▲, ▼] to select a desired item and press [ENTER].



■ To return to the previous screen

Press [RETURN].

■ To exit the screen

Press [RETURN].

▶ Erase Playlist

RAM (Multiple editing → 33)

- Follow steps 1 to 5 of “Using playlist to edit playlists/chapters”.

6 Select “Erase Playlist” with [▲, ▼] and press [ENTER].

7 Select “Erase” with [◀] and press [ENTER].

- The playlist is erased.



- Once a playlist has been erased, it cannot be restored. Check carefully before proceeding.
- Even if you erase the playlist, the original title is not erased.

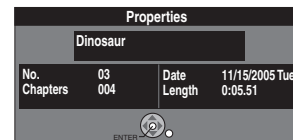
▶ Properties

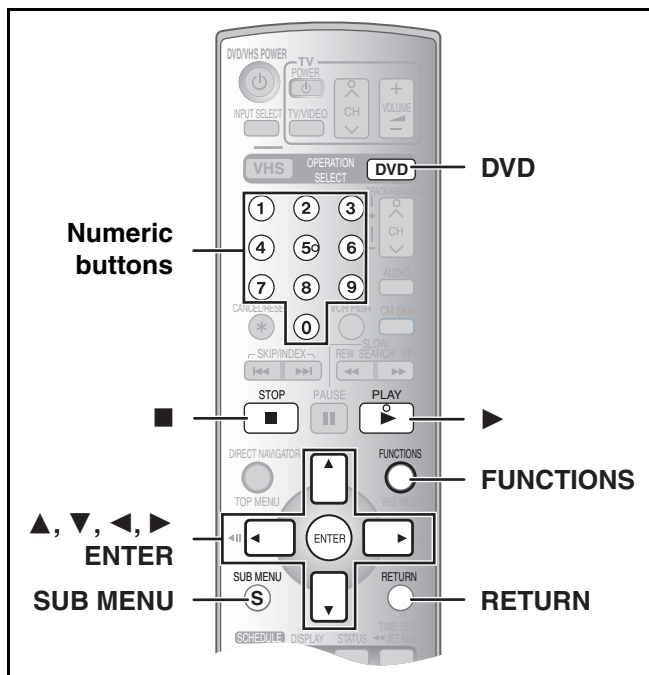
RAM -RW(VR)

- Follow steps 1 to 5 of “Using playlist to edit playlists/chapters”.

6 Select “Properties” with [▲, ▼] and press [ENTER].

Playlist information (e.g., date and length) is shown.





▶ Edit

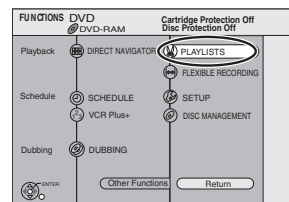
RAM

You can perform various kinds of playlist editing.

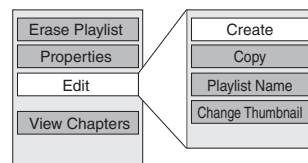
Preparation

- Create playlists (→ 36).
- Release protection (disc → 30, cartridge → 30).
- Press [DVD].

- 1 While stopped**
Press [FUNCTIONS].
- 2 Select “Other Functions”** with [▲, ▼] and press [ENTER].
- 3 Select “PLAYLISTS”** with [▲, ▼] and press [ENTER].



- Chapters are not displayed if you have not yet created a playlist on the disc.
- 4 Use [▲, ▼, ◀, ▶] to select a playlist.**
• “To show other pages” → 33
- 5 Press [SUB MENU], then select “Edit”** with [▲, ▼] and press [ENTER].
- 6 Use [▲, ▼] to select a desired item and press [ENTER].**



■ To return to the previous screen

Press [RETURN].

■ To exit the screen

Press [RETURN].

▶▶ Create

- Follow steps 1 to 5 of “Edit”.

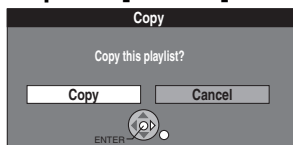
- 6 Select “Create”** with [▲, ▼] and press [ENTER].
Refer to “Creating playlists”, steps 5–8. (→ 36)

▶▶ Copy

- Follow steps 1 to 5 of “Edit”.

(Multiple editing → 33)

- 6 Select “Copy”** with [▲, ▼] and press [ENTER].
- 7 Select “Copy”** with [◀] and press [ENTER].



▶▶ Playlist Name

- Follow steps 1 to 5 of “Edit”.

- 6 Select “Playlist Name”** with [▲, ▼] and press [ENTER].

Refer to “Entering text”. (→ 32)

▶▶ Change Thumbnail

- Follow steps 1 to 5 of “Edit”.

You can change the image to be shown as a thumbnail picture in the Playlist View.

- 6 Select “Change Thumbnail”** with [▲, ▼] and press [ENTER].
- 7 Press [▶, PLAY] to play.**
- 8 Press [ENTER] at the point you want to display.**

(→ 35, “For quicker editing”)

• To change to another point in the same title:

- Select “Change” with [▲, ▼] and press [▶, PLAY], and then repeat step 8.

- 9 Select “Exit”** with [▲, ▼] and press [ENTER].

- The displayed scene is changed at this point.



▶ View Chapters

RAM -RW(VR) (Play only)

- Follow steps 1 to 4 of “Edit”.

You can play/edit the chapters in a playlist.

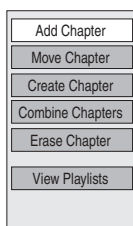
5 Press [SUB MENU], and select “View Chapters” with [▲, ▼] and press [ENTER].

6 Use [▲, ▼, ◀, ▶] to select a desired chapter.

- You can also select a chapter from the chapter view by entering a 3-digit number with the numeric buttons.
e.g.: “5”: [0]→[0]→[5]
“15”: [0]→[1]→[5]
- If you enter a number larger than the total number of chapters, the last chapter is selected.
- Editing chapters in a playlist does not modify the source titles and source chapters.
- “To show other pages” → 33

7 Press [SUB MENU].

8 Use [▲, ▼] to select a desired item and press [ENTER].



■ To play a chapter

Press [ENTER] after step 5.

■ To stop chapter play

Press [■, STOP]. (The Chapter View screen appears.)

▶▶ Add Chapter

RAM

- Follow steps 1 to 7 of “View Chapters”.

8 Select “Add Chapter” with [▲, ▼] and press [ENTER].

Refer to “Creating playlists”, steps 5–8. (→ 36)

▶▶ Move Chapter

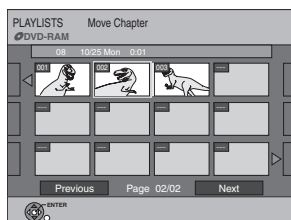
RAM

- Follow steps 1 to 7 of “View Chapters”.

8 Select “Move Chapter” with [▲, ▼] and press [ENTER].

9 Use [▲, ▼, ◀, ▶] to select the position to insert the chapter and press [ENTER].

- The chapter is moved and inserted before the highlighted chapter.



▶▶ Create Chapter

RAM

- Follow steps 1 to 7 of “View Chapters”.

8 Select “Create Chapter” with [▲, ▼] and press [ENTER].

9 Press [ENTER] at the point you want to divide.
(→ 35, “For quicker editing”)



- Repeat this step to divide at other points.

10 Select “Exit” with [▼] and press [ENTER].

Note

- A short portion of the recording just after the creation point may be lost.

For your reference

- The divided titles retain the name of the original title. They also retain the CPRM property (→ 64) of the original.
- It is not possible to carry out “Create” when the resulting part(s) are extremely short.

▶▶ Combine Chapters

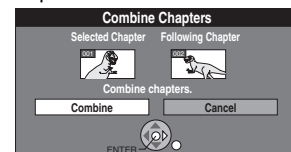
RAM

- Follow steps 1 to 7 of “View Chapters”.

8 Select “Combine Chapter” with [▲, ▼] and press [ENTER].

9 Select “Combine” with [◀] and press [ENTER].

- The selected chapter and next chapter are combined.



▶▶ Erase Chapter

RAM

- Follow steps 1 to 7 of “View Chapters”.

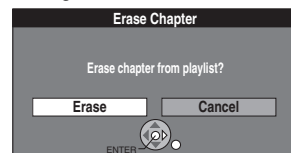
(Multiple editing → 33)

Once erased, the recorded contents are lost and cannot be restored. Make certain before proceeding.

8 Select “Erase Chapter” with [▲, ▼] and press [ENTER].

9 Select “Erase” with [◀] and press [ENTER].

- Even if you erase the chapter, the original title is not erased.



▶▶ View Playlists

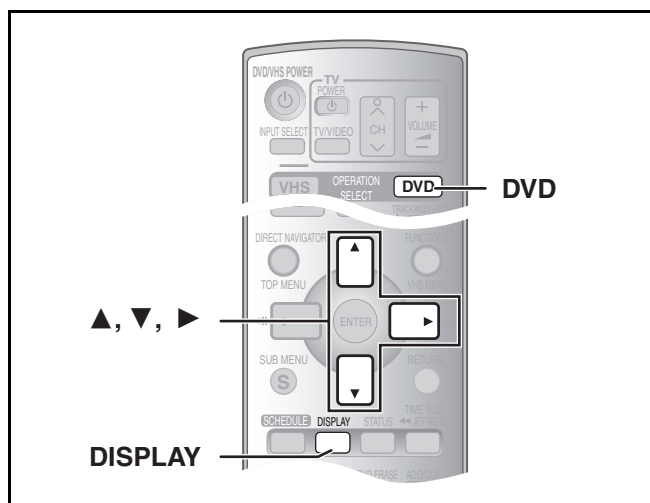
RAM -RW(VR)

- Follow steps 1 to 7 of “View Chapters”.

8 Select “View Playlists” with [▲, ▼] and press [ENTER].

You go back to Playlist View.

Using DISPLAY menus



RAM -R -RW(V) +R DVD-A DVD-V -RW(VR) VCD CD

Common procedures

Preparation

- Press [DVD].

1 Press [DISPLAY].

Disc	Soundtrack	1	Digital 2/0ch
Play	Subtitle	Off	
Video	Audio channel	Stereo	
Audio			
Other			

Menu

Item

Setting

2 Select a menu with [▲, ▼] and press [▶].

3 Select an item with [▲, ▼] and press [▶].

4 Select a setting with [▲, ▼].

- Different operations are required depending on settings. Follow the on-screen instructions.

To exit the screen

Press [DISPLAY].

For your reference

- The screens depend on the disc contents.
- Depending on the condition of the unit (playing, stopped, etc.) and the type of software you are playing, there are some items that you cannot select or change.

Disc menu

RAM -R -RW(V) +R DVD-A DVD-V -RW(VR) VCD

Disc	Soundtrack	1	Digital 2/0ch
Play	Subtitle	Off	
Video	Audio channel	Stereo	
Audio			
Other			

Soundtrack

RAM -R -RW(V) +R -RW(VR)

The disc's audio attributes appear.

DVD-A DVD-V

Select the audio and language. (See [B] Audio attributes)

Subtitle

DVD-A DVD-V

Turn the subtitle on/off and select the language (See [A] Sound track/Subtitle language)

RAM -R -RW(V) +R -RW(VR) (Only disc that contain subtitle on/off information)

Turn the subtitle on/off.

- Subtitle on/off information cannot be recorded using this unit.
- If the subtitles overlap the closed captions recorded on discs, turn the subtitles off.

Audio channel RAM -RW(VR) VCD

→ 23, Changing audio during play

Angle DVD-A DVD-V

Change the number to select an angle.

STILL-P (Still picture) DVD-A

Selects the play method for still pictures.

Slide Show: Plays according to the default order on the disc.

Page: Select the still picture number and play.

- RANDOM:** Plays in random order.
- Return:** Returns to the default still picture on the disc.

PBC (Playback control) VCD (→ 64)

Indicates whether menu play (playback control) is on or off.

[A] Sound track/Subtitle language

ENG: English	SVE: Swedish	CHI: Chinese
FRA: French	NOR: Norwegian	KOR: Korean
DEU: German	DAN: Danish	MAL: Malay
ITA: Italian	POR: Portuguese	VIE: Vietnamese
ESP: Spanish	RUS: Russian	THA: Thai
NLD: Dutch	JPN: Japanese	*: Others

[B] Audio attributes

LPCM/PPCM/Digital/DTS/MPEG: Signal type

k (kHz): Sampling frequency

b (bit): Number of bits

ch (channel): Number of channels

For your reference

- The display changes according to the disc content. You cannot make a change when there is no recording.
- Some discs allow changes to sound tracks, subtitles, and angles only by using the disc's setup menus (→ 21).

▶ Play menu

RAM -R -RW(V) +R DVD-A DVD-V -RW(VR) VCD CD	
Disc	Repeat Play Off
Play	
Video	
Audio	
Other	

Repeat play

This function works only when the elapsed play time is displayed.
Select the item for repeat play. Depending on the disc, the items that can be selected will differ.

RAM -R -RW(V) +R DVD-V -RW(VR)

Title↔Chapter↔Off

VCD CD (excluding MP3 discs)

Track↔All↔Off

DVD-A CD (MP3 discs only)

Track↔Group↔Off

While playing a playlist

RAM

Playlists↔Off

▶ Video menu

RAM -R -RW(V) +R DVD-A DVD-V -RW(VR) VCD	
Disc	Picture Normal
Play	MPEG-DNR On
Video	Progressive On Transfer Auto 1
Audio	Line-in NR Automatic
Other	

Picture

To select the picture mode during play

Normal: Default setting

Soft: Soft picture with fewer video artifacts

Fine: Details are sharper

Cinema: Mellow movies, enhances detail in dark scenes.

MPEG-DNR

Reduces noise and picture degradation.

On↔Off

*Progressive (→ 64)

Select "On" to enable progressive output.

• Select "Off" if the picture is stretched horizontally.

• When progressive output is on, closed captions cannot be displayed.

On↔Off

*Transfer (When "Progressive" is set to "On")

Select the method of conversion for progressive output to suit the type of material being played (→ 64, Film and Video).

Auto1 (normal):

Detects 24 frame-per-second film content and appropriately converts it.

Auto2: Compatible with 30 frame-per-second film content in addition to 24 frame-per-second film content.

Video: Select when the video content is distorted by using Auto1 and Auto2.

Line-in NR (Only when IN1, IN2 or TP is selected)

Reduces video tape noise during transfer (dub).

Depending on the software, jittering may occur.

Automatic:

Noise reduction only works on picture input from a video tape.

On: Noise reduction works for any video input.

Off: Noise reduction is off. Select when you want to record input as is.

* Only when you have selected "480p" in "TV Type" (→ 19).

▶ Audio menu

RAM -R -RW(V) +R DVD-A DVD-V -RW(VR)	
Disc	V.S.S. Off
Play	Dialog Enhancer Off
Video	
Audio	
Other	

V.S.S.

RAM -R -RW(V) +R DVD-A DVD-V -RW(VR)

(Only for Dolby Digital with 2.0 or more channels)

Enjoy a surround-sound effect if you are using 2 front speakers (L/R) only.

Natural↔Emphasis↔Off

Note

- Turn V.S.S. off if it causes distortion.
- V.S.S. does not work for SAP recordings.

Dialog Enhancer

RAM -RW(V) +R DVD-V DVD-A -RW(VR)

(Dolby Digital, 3-channel or over only, including a center channel)

The volume of the center channel is raised to make dialog easier to hear.

On↔Off

▶ Other menu

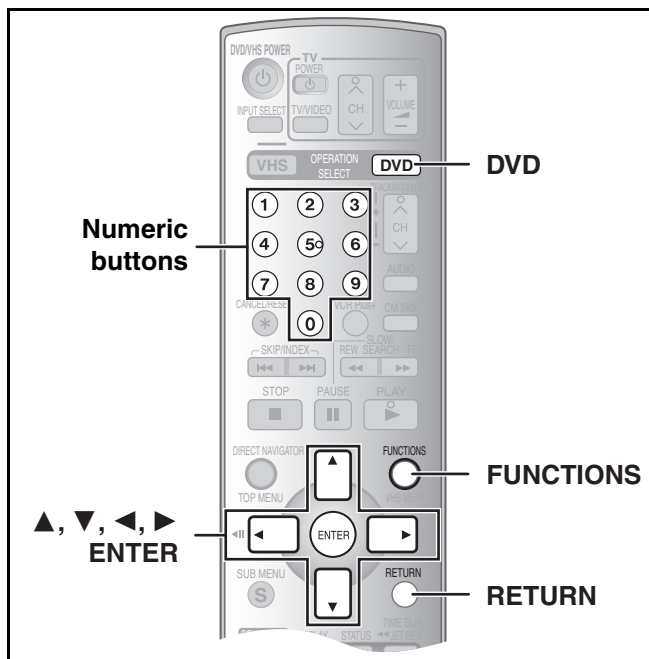
Disc	
Play	
Video	
Audio	
Other	Position 1

Position

To change the display position

1 (Standard) -5:

The higher the setting the lower the screen moves.



Changing the unit's settings

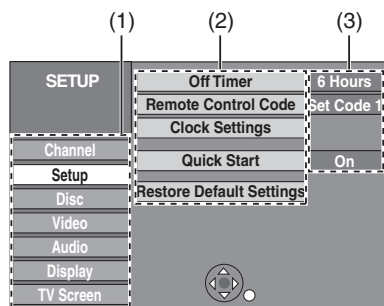
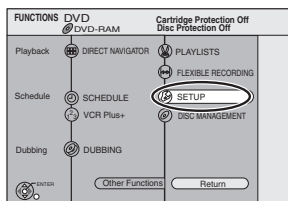
Preparation

- Press [DVD].

Common procedures

Use the following procedure to change the settings if necessary.

- 1 While stopped
Press [FUNCTIONS].
- 2 Select "Other Functions" with [▲, ▼] and press [ENTER].
- 3 Select "SETUP" with [▲, ▼] and press [ENTER].



- (1) Menus
(2) Items
(3) Options

- 4 Select a menu with [▲, ▼] and press [◀, ▶].
- 5 Select an item to be changed with [▲, ▼] and press [ENTER].
- 6 Select an option with [▲, ▼] and press [ENTER].
 - Some options require different operations. Follow the displayed instructions.

To return to the previous screen

Press [RETURN]. Even if you have changed an option, the change is not activated until you press [ENTER].

To exit the screen

Press [RETURN] several times.

For your reference

- The settings remain intact even if you switch the unit to standby.

Entering a password (Ratings)

You can limit play of DVDs unsuitable for some audiences (children, for example). Play and changes to the settings are not possible unless you enter a password.

Preparation

- Press [DVD].

When setting ratings

The password screen is shown when you select levels 0 to 7.

- 1 Input a 4-digit password with the numeric buttons.
 - If you enter a wrong number, press [◀] to erase it before you press [ENTER].
 - Do not forget your password.
- 2 Press [ENTER].
- 3 Press [ENTER].

The password is entered and the unit is locked.

Now, when you insert a DVD-Video that exceeds the ratings limit you set, a message appears on the TV.

Follow the on-screen instructions.

When changing ratings

The password screen is shown when you select "Ratings". (→ 43)

- 1 Input a 4-digit password with the numeric buttons and press [ENTER].

- Unlock Recorder:** To unlock the unit and return the rating to 8
- Change Password:** To change your password
- Change Level:** To change the rating level
- Temporary Unlock:** To temporarily unlock the unit (the unit locks again if you switch it to standby or open the disc tray)

- 2 Select a desired item with [▲, ▼] and press [ENTER].
Actual screens depend on the operation. Follow the on-screen instructions.

Summary of settings

This description shows the initial settings for the unit. For details on menu operation. (→ 42)

Underlined items are the factory default settings.

-   indicates settings effective for both DVD and VHS.
-  indicates settings effective for DVD only.

■ Channel

Signal Source (RF IN) (→ 17)

Select to suit the type of antenna you are using.

[Antenna] [CableTV]

Set Channels Automatically (→ 17)

Preset Channel Captions (→ 18)

Manual Channel Captions (→ 18)

VCR Plus+ Ch. Setting (→ 17)

■ Setup

Off Timer

Select how long the unit remains on when it is not being used.

[2 Hours] [6 Hours] [Off]

Remote Control Code (→ 19)

[Set Code 1] [Set Code 2] [Set Code 3]

Clock Settings

Press [ENTER] to show the following settings.

Set Clock Automatically (→ 46)

Set Clock Manually (→ 46)

Adjust Time Zone (→ 46)

This corrects the time set in Auto Clock Setting.

The status is not displayed on the Set Up menu when the Auto Clock Setting is not set.

[-1] [0] [+1]

Quick Start

1 Sec. Quick Start for Recording on DVD-RAM*

- * From the power off state, recording on DVD-RAM starts about 1 second after first pressing the [⏻, DVD/VHS POWER] and then sequentially pressing the [●, REC] (Quick Start Mode).

Power consumption is also higher when the unit is turned off if this is set to "On".

[On] [Off]

Restore Default Settings

This returns SETUP menus to default settings, except for the clock, channel settings, ratings level, and on-screen language.

[Yes] [No]

■ Disc

Settings for Playback

Press [ENTER] to show the following settings.

Ratings (→ 42)

Set a ratings level to limit DVD-Video play.

Setting ratings (When level 8 is selected)

[8 No Limit]: All DVD-Video can be played.

[1] to [7]: Prohibits play of DVD-Video with corresponding ratings recorded on them.

[0 Lock All]: Prohibits play of all DVD-Video.

Changing ratings (When level 0 to 7 is selected)

[Unlock Recorder] [Change Password]

[Change Level] [Temporary Unlock]

Play DVD-Audio in Video Mode

Select "Video Mode (Video On)" to play DVD-Video content on some DVD-Audio.

[Video Mode (Video On)] [Audio Mode (Video Off)]

Video Mode (Video ON)	The setting returns to "Audio Mode (Video Off)" when you change the disc or turn the unit off.
------------------------------	--

Audio Language

[English] [French] [Spanish] [Original] [Other *****]

Subtitle Language

[Automatic] [English] [French] [Spanish] [Other *****]

Menu Language

[English] [French] [Spanish] [Other *****]

Choose the language for audio, subtitles and disc menus. **DVD-V**

- If a language which is not recorded is selected, or if languages are already fixed on the disc, the language set as the default on the disc will be played instead.

Original

The original language of each disc will be selected.

Other *****

This is the language code setting.

Input a code number with the numeric buttons. (→ 45, "Language code list")

Automatic

If the language selected for "Audio Language" is not available, subtitles of that language will automatically appear if available on the disc.

Settings for Recording

Press [ENTER] to show the following settings.

Recording Time in EP Mode

Select the maximum number of hours for recording in EP mode (→ 25, "Recording modes and approximate recording times").

[EP-Extended Play (6H)] [EP-Extended Play (8H)]

EP-Extended Play (6H)	You can record for 6 hours on an unused 4.7 GB disc.
EP-Extended Play (8H)	You can record for 8 hours on an unused 4.7 GB disc.

- Underlined items are the factory default settings.

■ Video

Still Mode

Select the type of picture shown when you pause play.

(→ 64, "Frame and field")

[Automatic] [Field] [Frame]

Field	Select if jittering occurs when "Automatic" is selected.
Frame	Select if you cannot see small text or fine patterns clearly when "Automatic" is selected.

Black Level Control

Select "Normal", "Lighter" or "Darker" to adjust the black level control to the desired setting for picture enhancement.

Press [ENTER] to show the following settings.

Input Level

Adjusts the black level of the input signal.

[Lighter] [Darker]

Output Level (Composite/SVideo)

Adjusts the black level of the output signal from the VIDEO OUT and S-VIDEO OUT terminal.

[Lighter] [Darker]

Output Level (Component)

Adjusts the black level of the output signal from the COMPONENT VIDEO OUT (Y/Pb/Pr) terminals.

[Lighter] [Normal] [Darker]

■ Audio

Dynamic Range Compression

DVD-V (Dolby Digital only)

Change the dynamic range (→ 64) for easier listening in low volume.

[On] [Off]

Select MTS

Select whether to record the main or secondary audio type (SAP) when recording or transferring (dubbing) to DVD-R, DVD-RW (DVD-Video format) or +R. (You cannot select the audio type on the unit when recording audio to DVD-R, DVD-RW (DVD-Video format) or +R from an external device. Select it on the external device.)

[Main] [Secondary Audio Program (SAP)]

Digital Audio Output

Change the settings when you have connected equipment through the unit's DIGITAL AUDIO OUT terminal (→ 15).

Press [ENTER] to display the menu.

PCM Down Conversion

Select how to output audio with a sampling frequency of 96 kHz or 88.2 kHz.

- Signals are converted to 48 kHz or 44.1 kHz despite the above settings if the signals have a sampling frequency of over 96 kHz or 88.2 kHz, or the disc has copy protection.

[On] [Off]

On	Signals are converted to 48 kHz or 44.1 kHz. (Choose when the connected equipment cannot process signals with sampling frequency of 96 kHz or 88.2 kHz.)
Off	Signals are output as 96 kHz or 88.2 kHz. (Choose when the connected equipment can process signals with sampling frequency of 96 kHz or 88.2 kHz.)

Dolby Digital

Choose whether to output by "Bitstream" which processes Dolby Digital signals on other connected equipment or to convert the signals to "PCM (2ch)" on the unit before output.

[Bitstream] [PCM]

Bitstream	When you have connected the unit to a piece of equipment having Dolby Digital logo.
PCM	When you have connected the unit to a piece of equipment that doesn't have Dolby Digital logo*.

DTS

Choose whether to output by "Bitstream" which processes DTS signals on other connected equipment or to convert the signals to "PCM (2ch)" on the unit before output.

[Bitstream] [PCM]

Bitstream	When you have connected the unit to a piece of equipment having DTS logo.
PCM	When you have connected the unit to a piece of equipment that doesn't have DTS logo*.

- * Incorrect settings can cause noise to be output which can be harmful to your ears and speakers, and audio will not be recorded properly on media such as mini discs.

Convenient functions



- Underlined items are the factory default settings.

■ Display

Status Messages

Choose whether to show status messages automatically or not.

[Automatic] [Off]

On-screen Language

Choose the language for these menus and the on-screen messages.

[English] [Español] [Français]

Blue Background

Select whether to show the blue background, normally shown when TV reception is poor.

[On] [Off]

Front Display

Changes the brightness of the unit's display.

[Bright] [Dim] [Automatic]

Automatic	The display turns dark during play, and reappears momentarily if a button is pressed. When the unit is turned off, the unit's display disappears. While using this mode the standby power consumption can be reduced.
------------------	---

■ TV Screen

TV Type (→ 19)

Choose the setting to suit your TV and preference.

[Aspect 4:3 & 480i] [Aspect 4:3 & 480p]

[Aspect 16:9 & 480i] [Aspect 16:9 & 480p]

4:3 TV Settings for DVD-Video

You can select how to display the image on the TV when you watch 16:9 images (DVD-Video) on a 4:3 standard aspect TV. (→ 64)

[Pan and Scan (Stretch to fit)] [Letterbox (Shrink to fit)]

Pan and Scan (Stretch to fit) 	Video recorded for a widescreen is played with the sides cut off if Pan & Scan was specified. If 16:9 software prohibits Pan & Scan, the image will appear in the letterbox style (with black bands above and below the picture) despite the setting here.
Letterbox (Shrink to fit) 	Video recorded for a widescreen is played in the letterbox style.

4:3 TV Settings for DVD-RAM

You can select how to display the image on the TV when you watch 16:9 images (DVD-RAM) on a 4:3 standard aspect TV. (→ 64)

[4:3] [Pan and Scan (Stretch to fit)] [Letterbox (Shrink to fit)]

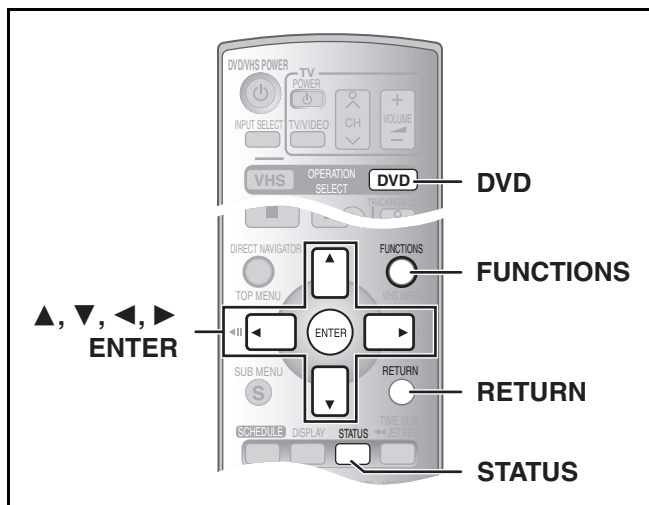
4:3	Titles are played as recorded.
Pan and Scan (Stretch to fit)	Video recorded for a widescreen is played with the sides cut off.
Letterbox (Shrink to fit)	Video recorded for a widescreen is played in the letterbox style.

Convenient functions

Language code list

Abkhazian: 6566	Chinese: 9072	Hausa: 7265	Lithuanian: 7684	Romanian: 8279	Telugu: 8469
Afar: 6565	Corsican: 6779	Hebrew: 7387	Macedonian: 7775	Russian: 8285	Thai: 8472
Afrikaans: 6570	Croatian: 7282	Hindi: 7273	Malagasy: 7771	Samoan: 8377	Tibetan: 6679
Albanian: 8381	Czech: 6783	Hungarian: 7285	Malay: 7783	Sanskrit: 8365	Tigrinya: 8473
Ameharic: 6577	Danish: 6865	Icelandic: 7383	Malayalam: 7776	Scots Gaelic: 7168	Tonga: 8479
Arabic: 6582	Dutch: 7876	Indonesian: 7378	Maltese: 7784	Serbian: 8382	Turkish: 8482
Armenian: 7289	English: 6978	Interlingua: 7365	Maori: 7773	Serbo-Croatian: 8372	Turkmen: 8475
Assamese: 6583	Esperanto: 6979	Irish: 7165	Marathi: 7782	Shona: 8378	Twi: 8487
Aymara: 6588	Estonian: 6984	Italian: 7384	Moldavian: 7779	Sindhi: 8368	Ukrainian: 8575
Azerbaijani: 6590	Faroese: 7079	Japanese: 7465	Mongolian: 7778	Singhalese: 8373	Urdu: 8582
Bashkir: 6665	Fiji: 7074	Javanese: 7487	Nauru: 7865	Slovak: 8375	Uzbek: 8590
Basque: 6985	Finnish: 7073	Kannada: 7578	Nepali: 7869	Slovenian: 8376	Vietnamese: 8673
Bengali, Bangla: 6678	French: 7082	Kashmiri: 7583	Norwegian: 7879	Somali: 8379	Volapük: 8679
Bhutani: 6890	Frisian: 7089	Kazakh: 7575	Oriya: 7982	Spanish: 6983	Welsh: 6789
Bihari: 6672	Galician: 7176	Kirghiz: 7589	Pashto, Pushto: 8083	Sundanese: 8385	Wolof: 8779
Breton: 6682	Georgian: 7565	Korean: 7579	Persian: 7065	Swahili: 8387	Xhosa: 8872
Bulgarian: 6671	German: 6869	Kurdish: 7585	Polish: 8076	Swedish: 8386	Yiddish: 7473
Burmese: 7789	Greek: 6976	Laotian: 7679	Portuguese: 8084	Tagalog: 8476	Yoruba: 8979
Byelorussian: 6669	Greenlandic: 7576	Latin: 7665	Punjabi: 8065	Tajik: 8471	Zulu: 9085
Cambodian: 7577	Guarani: 7178	Latvian, Lettish: 7686	Quechua: 8185	Tamil: 8465	
Catalan: 6765	Gujarati: 7185	Lingala: 7678	Rhaeto-Romance: 8277	Tatar: 8484	

Clock Settings

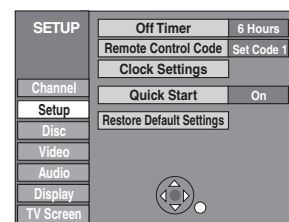
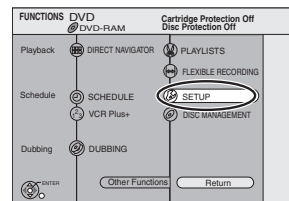


“Clock settings” made here are applied to VHS as well.

Preparation

- Press [DVD].

- 1 While stopped**
Press [FUNCTIONS].
- 2 Select “Other Functions”** with [▲, ▼] and press [ENTER].
- 3 Select “SETUP”** with [▲, ▼] and press [ENTER].
- 4 Select “Setup”** with [▲, ▼] and press [ENTER].
- 5 Select “Clock Settings”** with [▲, ▼] and press [ENTER].



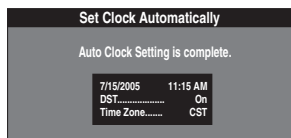
▶ Set Clock Automatically

- Follow steps 1 to 5 of “Clock Settings”.

- 6 Select “Set Clock Automatically”** with [▲, ▼] and press [ENTER].

- 7 Press [ENTER].**

- Auto setting starts. This can take some time, up to a few hours in some cases. The following screen appears when setting is complete.



- If the time was not set correctly, use manual clock setting or time zone adjust.
- DST, (Daylight Saving Time) shows the summertime setting.
- Time Zone shows the time difference from Greenwich Mean Time (GMT).

EST (Eastern Standard Time) = GMT -5
 CST (Central Standard Time) = GMT -6
 MST (Mountain Standard Time) = GMT -7
 PST (Pacific Standard Time) = GMT -8
 AST (Alaska Standard Time) = GMT -9
 HST (Hawaii Standard Time) = GMT -10
 For other areas: xx hr

- 8 Press [ENTER].**

■ To cancel in the middle

Press [RETURN].

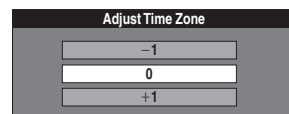
▶ Adjust Time Zone

- Follow steps 1 to 5 of “Clock Settings”.

Adjust the time zone (−1 or +1) if it was not set correctly with auto clock setting.

You cannot change this setting if you set the clock manually.

- 6 Select “Adjust Time Zone”** with [▲, ▼] and press [ENTER].



- 7 Select “−1” or “+1”** with [▲, ▼] and press [ENTER].

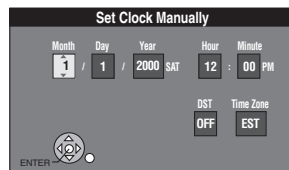
■ To return to the previous screen

Press [RETURN].

▶ Set Clock Manually

- Follow steps 1 to 5 of “Clock Settings”.

- 6 Select “Set Clock Manually”** with [▲, ▼] and press [ENTER].



- 7 Use [◀, ▶] to select the item you want to change, and press [▲, ▼] to change the setting.**

- DST (Daylight Saving Time): On or Off

If you select “ON”, the clock is advanced one hour starting at 2 a.m. on the first Sunday in April and ending at 2 a.m. on the last Sunday in October.

- Time Zone (→above)

- 8 Press [ENTER].**

- The clock starts.

• When you change the time zone, the recording times for titles recorded before the time zone adjustment also change to correspond to the new time zone.

■ To return to the previous screen

Press [RETURN].

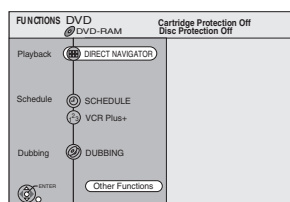
FUNCTIONS window

By using the FUNCTIONS window you can access the main functions quickly and easily.

Preparation

- Press [DVD].

- 1 While stopped
Press [FUNCTIONS].



- Functions displayed depend on the type of disc.

- 2 Select an item with [▲, ▼] and press [ENTER].

- If you select "Other Functions", press [▲, ▼] to select an item and press [ENTER].

■ To exit the FUNCTIONS window

Press [FUNCTIONS].

Status displays

Preparation

- Press [DVD].

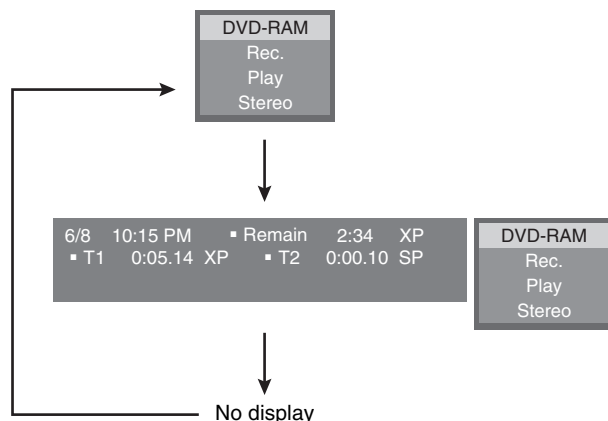
■ Changing the information displayed

Status messages appear on the TV when operating the unit, to show you what operation was performed and what condition the unit is in.

Press [STATUS] to change the information displayed.

The display changes each time you press the button.

For example, DVD-RAM



■ Display examples

- (1) Current medium
- (2) Current recording or play status, input channel

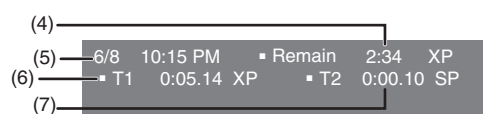
- Shows the current state of the unit and the input channel.

- Rec.: Recording
 Pause: Recording paused
 Play: Playing
 Play X1.3: Quick Viewing (Play × 1.3)
 II: Playing paused
 ►►: Fast forwarding (5 speeds)
 ◀◀: Rewinding (5 speeds)
 I►: Slow-motion (5 speeds)
 ◀I: Reverse slow-motion (5 speeds)

Tray Open/Tray Close:

Indicates the status of the disc tray

- (3) Audio type (→ 23, 25)



- (4) Available recording time and recording mode (e.g.: "2:34 XP" indicates 2 hours and 34 minutes in XP mode)
- (5) The current date and time
- (6) Elapsed play time
- (7) Recording time

- Shows recording time, recording mode and a rough guide to how much space has been used for recording on the disc.

Inserting a video cassette

The surface on which you can see a roll of tape should face up,
Insert a video cassette.

- The unit is automatically turned on.

■ To eject a video cassette

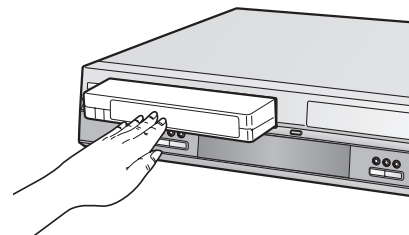
- You can eject a video cassette even when the unit is in standby mode. It switches back to standby once it ejects the video cassette.

For main unit

- Press [, EJECT] on the main unit.

For remote control

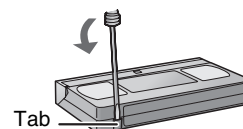
- Press [VHS] and then press and hold [, STOP] for about 3 or more seconds.



Video cassette information

■ Video cassettes

- Break off the video cassette's tab to prevent accidental erasure. Cover the hole with a double layer of adhesive tape when you want to use the video cassette for recording again.
- You can use video cassettes with the VHS and S-VHS marks, but the unit is unable to make full use of the characteristics of S-VHS video cassettes.



■ Video cassette care

- Poor quality or damaged video cassettes can cause the heads to become dirty and malfunction. Store your video cassettes carefully and discard them when they become dirty or damaged.
- Never use video cassettes on which juice has been spilled or those that are extremely damaged since this will not only cause the heads to become dirty, but will also make the unit malfunction.

■ Maintenance

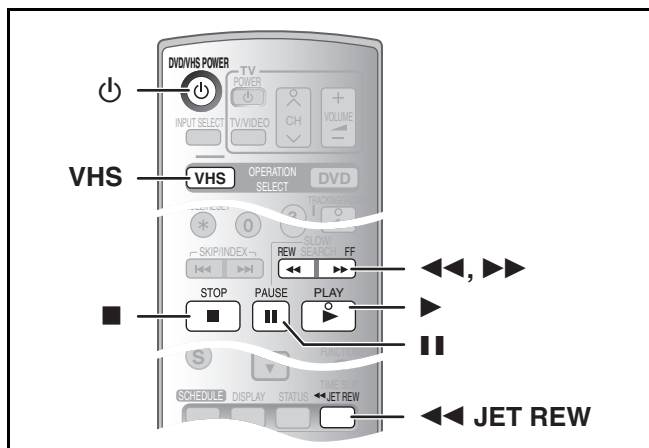
Cleaning the video heads

Dirt on the video heads can cause poor recording and play.



If the picture does not improve, use an optional head-cleaning cassette (part number NV-TCL30PT). If the problem persists, seek advice from a qualified service person.

Playing a video cassette



Preparation

- Select the unit viewing channel (e.g. the AV input) on the TV.
- Press [VHS].

- 1 Press [⏻, DVD/VHS POWER] to turn the unit on.
- 2 Insert a recorded video cassette. (→ 48)
- 3 Press [▶, PLAY].
 - Play starts automatically if you insert a video cassette with the tab removed.

■ To pause play

Press [⏸, PAUSE]. (Press again to restart play.)

■ To stop play

Press [■, STOP].

Note

- When the unit is standby, an inserted video cassette can be played back by pressing [▶, PLAY].
- When the tape reaches its end, the unit automatically rewinds it to the beginning. This function does not work during scheduled recording, fast-forwarding and specified stop recording.
- Jet Search, cue, review or slow playback will be automatically canceled after 10 minutes, and pause after 5 minutes.
- When viewing a still picture or during slow playback, the picture that appears in VP mode may be distorted.
- When playing back a tape which was recorded on another VCR, it may be necessary to adjust the tracking (→ 50). In some cases the picture quality may still be inferior. This is due to format constraints.

Fast-forward/Rewind

While stopped

Press [◀◀] (backward)/[▶▶] (forward).

Cue/Review

During play

Tap or keep pressing [◀◀] (backward)/[▶▶] (forward).

- If you keep pressing these buttons, normal playback restarts by releasing them.
- Tap [▶, PLAY] to restart normal playback.

Jet Search

During play

Tap [◀◀] (backward)/[▶▶] (forward) twice. You can increase Cue/Review search speed.

- Press [▶, PLAY] to restart normal playback.
- You can select search speed to view the recorded picture. (→ 54)
- The picture recorded in EP or VP mode may be distorted if it is played at approx. 35 times speed. A vertical scroll may occur. It is not a malfunction but if it happens, change to approx. 27 times speed.
- The picture may not be in color or may be distorted depending on the TV.

Slow

During play

Press and hold [⏸, PAUSE] for about 2 seconds or more.

- Press [▶, PLAY] to restart normal playback.

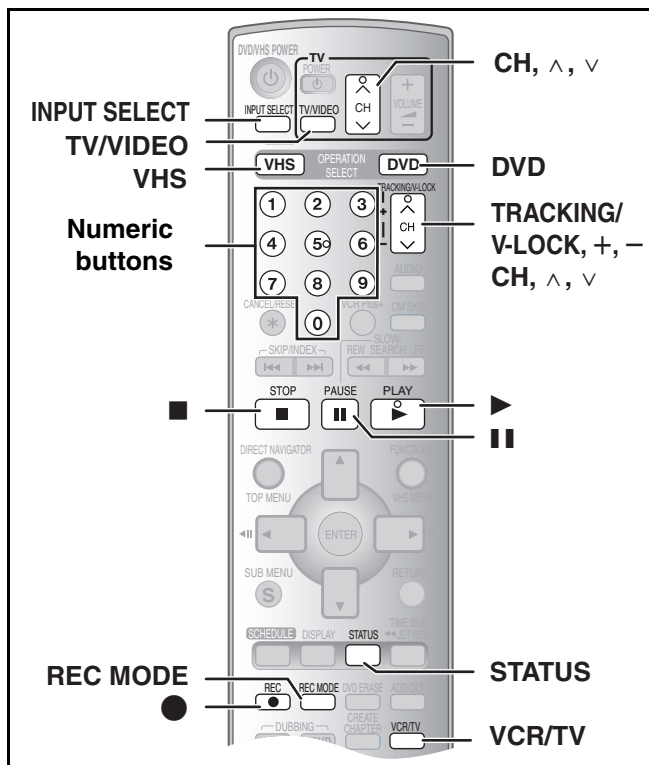
Jet Rewind

To perform a Higher Speed Rewind

Press [◀◀JET REW].

The "J. REW" indication appears on the TV screen (except when the remaining tape time indication appears).

- Depending on the tape or an operating condition, the rewind speed may change somewhat.
- The tape counter is reset to "0:00.00" when the tape is rewound to the beginning.
- Depending on the tape, this function may not work.



Preparation

- Press [VHS].

S-VHS Quasi Playback (SQPB)

- It is also possible to play back tapes recorded in the S-VHS system.
- Some picture noise may occur depending on the type of tape used.
 - It is not possible to fully obtain the high resolution that S-VHS is capable of.
 - It is not possible to record in the S-VHS system with the unit.

Repeat Playback

During play or while stopped

Keep pressing [▶, PLAY] for about 5 or more seconds.

- The "RP" indication appears on the unit's display.
- At the end of the program, the tape rewinds to the beginning of the program and plays it again (it only works if there is at least 5 seconds blank space at the end of the program). This repeats until you cancel it.

■ To restart normal playback

Press [▶, PLAY].

■ To stop play

Press [■, STOP].

Playing a tape with high image quality

With the TP channel, you can play a tape with high image quality on a TV compatible with progressive output.

Preparation

- Connect to the COMPONENT VIDEO IN terminals (→ 15)
- Select the TV type (→ 19, 45)

- 1 Press [DVD].**
- 2 Press [INPUT SELECT] or [CH, ^, v] to select the "TP" channel.**
 - About "TP" channel (→ 58)
- 3 Press [VHS] and press [▶, PLAY].**
 - Playing the tape with high image quality is initiated.

Note

- Set the TV's aspect ratio according to the TV size.
- The TV must be compatible with progressive output.

Adjusting the playback picture

■ Manual tracking

The unit usually makes tracking adjustments, but you may need to do it manually if noise appears on a tape recorded on other equipment.

During play

Press [TRACKING/V-LOCK, +] or [TRACKING/V-LOCK, -].

Repeat until the noise disappears.

■ Vertical locking adjustment

Adjust the vertical synchronization to stop the picture from jiggling while paused.

While paused

Press [TRACKING/V-LOCK, +] or [TRACKING/V-LOCK, -].

Repeat until the jiggling stops.

■ To return to auto tracking

Press both [TRACKING/V-LOCK, +] and [TRACKING/V-LOCK, -] simultaneously.

■ To remove the noise from a paused picture

Start slow play, then adjust the tracking.

Note

- This function may not work with some TV models and tapes.
- You can also adjust the tracking and vertical synchronization with [CH, ^, v] on the VHS side of the main unit.

Recording TV programs

■ Recording procedures

Preparation

- Select the unit viewing channel (e.g. AV input) on the TV.
- Check that the clock is set to the correct time. If it has not been set, set it (→ 46).
- Press [VHS].

1 Insert a video cassette with an intact accidental erasure prevention tab. (→ 48)

2 Press [CH, ^, v] to select a TV channel.

- If you keep pressing these buttons, the channels change quickly.

To select channels with the numeric buttons:

Antenna Mode (Airwaves)

e.g., "5": [0]→[5]

"15": [1]→[5]

CableTV Mode (Cable)

e.g., "5": [0]→[0]→[5]

"15": [0]→[1]→[5]

"115": [1]→[1]→[5]

3 Press [REC MODE] to select a recording mode.

Each time you press the button:

SP→EP→VP



4 Press [●, REC] to start recording.

■ To pause recording

Press [II, PAUSE]. (Press again to restart recording.)

■ To stop recording

Press [■, STOP].

Recording mode

SP: You can record the length shown on the tape.

EP: 3 times the length of SP mode.

VP: 5 times the length of SP mode.

- To have a longer recording capacity, select "EP" or "VP".
- If the image quality is important to you or if you wish to store the tape for a long period, select "SP".
- The unit can play tapes recorded in LP mode on other equipment ("LP" lights on the unit's display).

VP mode:

- "VP" flashes on the unit's display for 8 seconds after recording has started.
- **A tape recorded in VP mode by the unit cannot be played back by other VCRs. It is recommended to distinguish it from other tapes by writing "VP" on the tape label, etc.**
- It takes more time for automatic tracking to work when playing tapes recorded with VP mode, and it may not work at all with some tapes. Do tracking manually if this is the case (→ 50).

Note

- Even if the video cassette you use is labeled "S-VHS", it is not possible to record in the S-VHS system with the unit. It records in the normal VHS system.
- You cannot play VP recording on other equipment.
- You cannot change channels while recording. You can change channels while in pause mode.
- When recording is paused for 5 or more minutes, the unit returns to stop mode.

■ To display the approximate remaining tape time

- 1 Select "TAPE SELECT" from the VHS MENU and select the corresponding tape length. (→ 54)
- 2 Press [STATUS] several times.

The display changes as follows each time [STATUS] is pressed.

Clock → Counter → **Remaining tape time**



- The remaining tape time may not be displayed correctly depending on the tape used.

■ Specifying the time when recording will stop

Preparation

- Press [VHS].

While recording

Press [●, REC] to select recording time.

- On the main unit, press [●, REC] on the VHS side.

The unit's display

Each time you press the button:

Counter (Cancel) → OFF 0:30 → OFF 1:00 → OFF 1:30

↑ OFF 4:00 ← OFF 3:00 ← OFF 2:00 ←

For your reference

- This does not work during scheduled recording.
- Recording stops and the set time is cleared if you press [■, STOP].

■ Watching the TV while recording

Preparation

- Connection (without Audio/Video cable)
 - Make sure that the TV indicator is lit on the unit's display. If it is not lit, press [VCR/TV] to light it.
- Connection (with Audio/Video cable)
 - Press [TV/VIDEO] to change the input mode to "TV".

Press TV's [CH, ^, v] to select a desired TV channel.

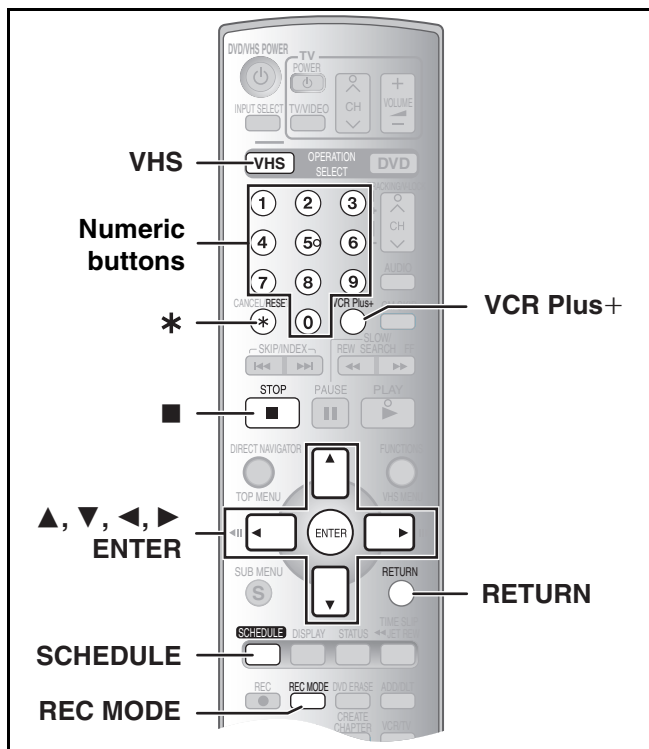
For your reference

- You can also do this if the unit is making a scheduled recording.
- The recording is not affected.

■ Playing/Recording DVD while VHS recording

You can play or record discs while recording. The recording will not be affected.

- DVD playback (→ 21)
- DVD recording (→ 25)
 - When a tuner channel is being recorded on VHS, you can only record the same channel on DVD.



Cautions for using scheduled recording on DVD and VHS

■ Scheduled recording automatically starts at the set time.

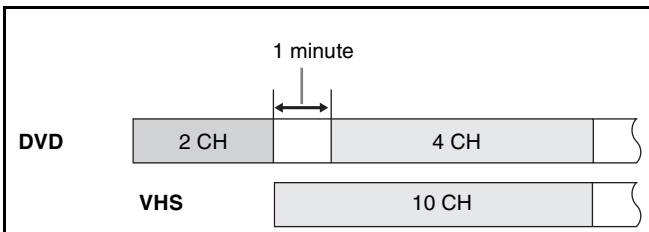
- Scheduled recording can be started whether the unit is turned on or off. When the unit is turned off, the sound and the video cannot be outputted to the TV.

■ Scheduled recording for TV programs cannot be executed on both DVD and VHS at the same time.

Make sure the scheduled recording start times do not overlap on both DVD (→ 29) and VHS (→ 53) Scheduled Recording screens.

When the scheduled recording settings overlap:

- When the start time of both scheduled recordings is the same, the scheduled recording of DVD has priority.
- When the same tuner channels are specified in scheduled recordings on both VHS and DVD, only one scheduled recording can be started.
- When the interval between the first scheduled recording and the second scheduled recording on DVD is 1 minute or less as shown below, the second scheduled recording on DVD has priority over the scheduled recording on VHS even if its start time is later than the scheduled recording on VHS.



When the scheduled recording settings of DVD and VHS are overlapped, the setting of DVD takes priority.

- “⊖” lights on the unit’s display of both sides in the standby mode. When the recording starts, “⊖” on the recording side (DVD side) remains lit and the “⊖” on the other side (VHS side) starts flashing.

Scheduled Recording

You can enter up to 16 programs a month in advance.

Preparation

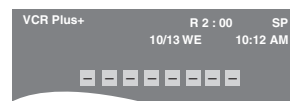
- Select the unit viewing channel (e.g. AV input) on the TV.
- Check that the clock is set to the correct time. If it has not been set, set it (→ 46).
- Insert a video cassette with an intact accidental erasure prevention tab. (→ 48)
- Press [VHS].

■ Using VCR Plus+ system

Entering the PlusCode® numbers is an easy way of scheduled recording. You can find these codes in TV listings in newspapers and magazines.

- When connecting a cable TV box or satellite receiver, the VCR Plus+ system does not work. Program the scheduled recording manually (→ 53).

1 Press [VCR Plus+].



2 Press the numeric buttons to enter the PlusCode number.

- Press [◀] to move back to correct a digit.

3 Press [ENTER].

SCHEDULED RECORDING		R 2:00		SP
		10/13 WE		10:12 AM
CH	DATE	ON	OFF	S P
25	13WE	10:12 AM	10:30 AM	S P

- Confirm the program and correct it if necessary using [▲, ▼, ◀, ▶]. (“Manual programming” → 53, step 2)
- “INVALID ENTRY” is displayed when you enter the wrong PlusCode number. Reenter the PlusCode number.

4 If the program is correct

Press [ENTER].

- “⊖” lights on the unit’s display.
- Repeat steps 1–4 to program other recordings.

5 Press [RETURN].

Manual programming

- When connecting a cable TV box or satellite receiver, select the channel on the cable TV box or satellite receiver before scheduled recording starts.

1 Press [SCHEDULE].

- Make sure "NEW SCHEDULED RECORDING" is selected.

NEW SCHEDULED
RECORDING is
selected.

CH	DATE	ON	OFF	S P
25	13WE	10:12 AM	10:30 AM	S P

NEW SCHEDULED RECORDING

2 Press [ENTER] to move and change the items using [▲, ▼, ◀, ▶].

SCHEDULED RECORDING		R 2 : 00		SP
CH	DATE	ON	OFF	
---	---	---	---	---

- You may also use the numeric buttons to enter "CH".
- CH** (Program Position/TV Station Name)
- DATE**
You can also make a daily or weekly program.
- ON** (start time)/**OFF** (finish time)
The time increases or decreases in 30-minute increments if you hold down the button.
- Recording mode**
You can also press [REC MODE] to change the recording mode.
SP ↔ EP ↔ VP ↔ A* ↔ SP... (→ 51)
* Auto SP/EP mode (→ right)

3 Press [ENTER] when you have finished making changes.

- "⊖" lights on the unit's display.
- "INVALID ENTRY" is displayed when you enter the wrong item. Reenter the item.
- To continue programming:
Select "NEW SCHEDULED RECORDING" and repeat steps 2–3.

4 Press [RETURN].

Note

- "⊖" and "⊙" flashes when the unit cannot perform scheduled recording (e.g., video cassette with no accidental erasure prevention tab or no video cassette in the cassette compartment).
- The actual time recorded may be longer than the program itself when TV programs are recorded using VCR Plus+ system.
- If you set (→ 46) "DST" (Daylight Saving Time) to "ON" when manually setting the clock, scheduled recording may not work when summer switches to winter and vice versa.

To stop recording while a program is working

Press [■, STOP], then [ENTER] within 5 seconds.

- You can also press and hold [■] on the VHS of the main unit for 3 or more seconds to stop recording.

Auto SP/EP mode

If, at the beginning of a scheduled recording, there is not enough tape remaining to complete the recording, the SP/EP function will automatically run the tape at EP speed for recording. This ensures that the entire program will be recorded. If EP mode is not enough to stretch the remaining tape to fit the whole program you will not be able to record the whole TV program.

Scheduled recording

1st program (30 min.)	2nd program (60 min.)	
30 min. at SP	15 min. at SP	45 min. at EP

Video tape (e.g.: 60-minute cassette)

- It is not possible to automatically activate VP mode.
- The tape length must be set correctly. (→ 54)
- Some tapes may not work correctly.
- If the recording mode changes from SP to EP during a scheduled recording, some picture distortion occurs at that point.

Check, change or delete programs

- Even when the unit is turned off, you can display the scheduled recording list by pressing [SCHEDULE].

Preparation

- Press [VHS].

1 Press [SCHEDULE].

CH	DATE	ON	OFF	S P
6	SA	11:00 PM	12:00 PM	S P
25	13WE	10:12 AM	10:30 AM	S P

NEW SCHEDULED RECORDING

2 Press [▲, ▼] to select a program.

3 Press [CANCEL/RESET, *] to delete,

You cannot delete programs that are currently recording.
or press [ENTER] to change.

The scheduled recording setting screen appears.

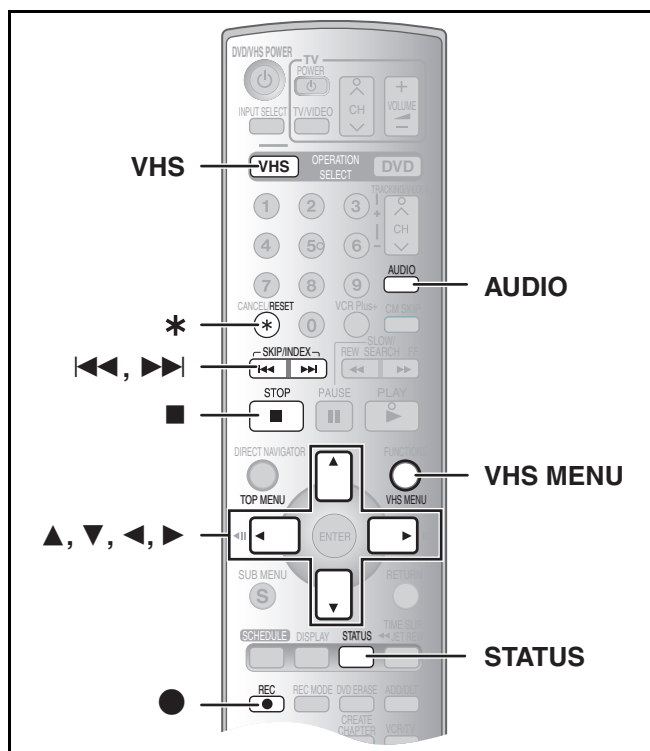
4 If you press [ENTER] in step 3

Use [▲, ▼, ◀, ▶] to change and press [ENTER].

5 Press [RETURN].

For your reference

- Programs that failed to record are not deleted from the list immediately, but are deleted from the list automatically at 4 a.m. 2 days later.



VHS Index Search System (VISS)

The unit automatically records special index signals on the tape every time a recording is started. The index search function makes use of these index signals to let you find the beginning of a desired program quickly and easily.

Index signals are recorded in the following cases.

- When a recording is started by pressing [●, REC].
- When scheduled recording is started.

Preparation

- Select the unit viewing channel on the TV.
- Press [VHS].
- Insert a recorded video cassette.

While stopped or during normal play

Press [◀◀] or [▶▶].

- Each press increases the number of skips.



To cancel the index search

Press [■, STOP].

Note

- You can search up to 20 index signals can be searched for in both directions.
- When you press either one of the buttons too much, you can control the number of skips by pressing the opposite button.
- The figure on the display decreases by 1 each time an index signal is located.
- This feature may not work correctly if the index signals are too close together. Make recordings of at least 5 minutes.

Changing the unit's settings

Preparation

- Select the unit viewing channel on the TV.
- Press [VHS].

Common procedures

- 1 While stopped
Press [VHS MENU].

VHS MENU		
OSD	● ON	○ OFF
TAPE SELECT	● T120	T160 T180
BLUE BACK	● ON	○ OFF
JET SEARCH	× 27	● × 35
SELECT : [▲] [▼] [◀] [▶]		
END : VHS MENU		

- 2 Use [▲, ▼] to select a desired item.
- 3 Use [◀, ▶] to change the setting.

To exit the settings screen

Press [VHS MENU].

Summary of settings

This description shows the initial settings for the unit. For details on menu operation (→ above).

- Underlined items are the factory default settings.

VHS MENU

OSD (→ 55)

[ON] [OFF]

ON	Messages appear on the TV screen for about 5 seconds after you perform operations. • The on-screen display will always appear on the TV screen during rewind, Jet Rewind and fast forward.
OFF	Messages do not appear.

TAPE SELECT

Set the length of tape you are using so the unit can show the correct remaining time.

[T120] [T160] [T180]

[T120]: T30, T60, T90 and T120 tapes
[T160]: T140 and T160 tapes
[T180]: T180 tapes

BLUE BACK

[ON] [OFF]

ON	The screen shows a blue background when you play unrecorded portions.
OFF	The blue background function does not work.

JET SEARCH (→ 49)

Set the speed for JET SEARCH when playing EP and VP tapes.

- It is possible to view the picture recorded in EP or VP mode at approx. 27 or 35 times speed.

[×27] [×35]

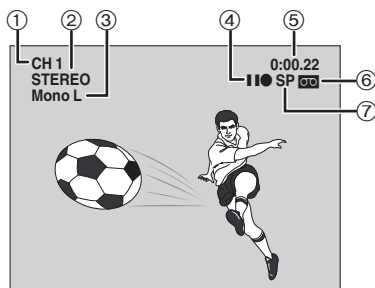
- Select [×27] if the picture is poor at [×35].

Various on-screen display indications

To see these displays, set the "OSD" item in the "VHS MENU" to "ON". (→ 54)

Press [STATUS].

The time and operation details appear on the screen for about 5 seconds.



①	Channel display
②	Stereo/Mono/SAP indication Indicates whether a program is broadcast in stereo, mono or SAP.
③	Audio indicators (appear only in playback) The Left (Mono L) and Right (Mono R) indicators show which sound mode is selected as follows: Stereo: Stereo indicators appear. Mono L: The Mono L indicator appears. Mono R: The Mono R indicator appears. Normal: Neither the L nor R indicator appears.
④	Operation status display
⑤	Shows the time and tape counter Pressing [STATUS] once makes the on-screen display appear. After that, press the button repeatedly to change the display as follows: Present time → Tape counter → Remaining tape time During Index search: "S 01" to "S 20" is displayed. During Jet Rewind: "J. REW" is displayed. ● Press [CANCEL/RESET, *] to reset the tape counter (elapsed time) to "0:00.00". The tape counter is automatically reset to "0:00.00" when inserting a video cassette. ● The remaining time is approximate. It will be incorrect if you set the wrong tape time in "TAPE SELECT" in the "VHS MENU" and if the tape is of poor quality.
⑥	Cassette-in indicator Shows whether you have inserted a video cassette.
⑦	Recording mode indicator (→ 51)

Note

- These displays do not appear when paused or during slow play.
- The on-screen display may be distorted depending on the playback tape or the input signal.

Changing audio

When a stereo and/or SAP broadcast is received, "STEREO" or "SAP" lights to show the type of broadcast.

While playing tapes

Press [AUDIO].

- The audio changes as follows:
Stereo → Mono L → Mono R → No display (Normal audio track)

■ While watching TV:

You cannot change audio.

Auto Bilingual Choice Function

When a stereo broadcast or SAP broadcast is recorded and played back on the unit, stereo sound will be automatically selected in the case of a stereo broadcast and SAP sound will be automatically selected in the case of a dual-sound broadcast (Mono and SAP or Stereo and SAP).

- This function may not work properly if the program is played back from a mid point. In a case like this, press [AUDIO] and select the right sound.
- The function will not work with a cassette which has been recorded using external equipment.

Transferring (Dubbing)



Before transferring (dubbing)

You can select from a variety of methods to transfer (dub) on the unit.
You cannot transfer (dub) titles which have been treated to prevent copying.

Direction		Type of transfer (dubbing) you want	Suitable methods
From	To		
VHS	DVD-RAM, DVD-R, DVD-RW, or +R	Easy transferring (dubbing) with one button ●When you want to transfer (dub) from the selected start point to the end of the tape	One Touch Transfer (→ 57)
		Transferring (dubbing) with detailed settings ●When you want to transfer (dub) from the selected start point to the end of the tape ●When you want to transfer (dub) to fit in the remaining capacity of the disc ●When you want to transfer (dub) while checking the video and the audio to select the desired part	GUI Transfer (→ 57)
			Manual Transfer (→ 58)
DVD-RAM or DVD-RW (DVD Video Recording format)	VHS	Easy transferring (dubbing) with one button ●When you want to transfer (dub) a whole disc ●When you want to transfer (dub) from the beginning of the selected title to the end of the disc	One Touch Transfer (→ 59)
		Transferring (dubbing) with detailed settings ●When you want to transfer (dub) multiple titles or playlists in combination ●When you want to transfer (dub) while checking the video and the audio to select the desired part	GUI Transfer (→ 60)
			Manual Transfer (→ 62)
DVD-R, DVD-RW (DVD-Video format) or +R	VHS	Easy transferring (dubbing) with one button ●When you want to transfer (dub) a whole disc ●When you want to transfer (dub) from the beginning of the selected title to the end of the disc	One Touch Transfer (→ 59)
		Transferring (dubbing) with detailed settings ●When you want to transfer (dub) while checking the video and the audio to select the desired part	Manual Transfer (→ 62)
Finalized DVD-R, DVD-RW (DVD-Video format), +R, +RW or DVD-Video on sale that are not copy-protected, etc.	VHS	Easy transferring (dubbing) with one button	Cannot transfer
		Transferring (dubbing) with detailed settings ●When you want to transfer (dub) whole of a disc ●When you want to transfer only for the specified time ●When you want to transfer (dub) while checking the video and the audio to select the desired part	DVD-Video Transfer (→ 61)
			Manual Transfer (→ 62)

■ Caution for transfer (dubbing) from VHS to DVD

- Copy-protected video tapes cannot be dubbed. Most video tapes are copy-protected to prevent illegal reproduction and they cannot be recorded.
- When a copy-protected tape is inserted, a message appears on the display and the recording stops on the spot.
- If a part of a tape recorded in VP mode is dubbed to disc, noise may appear at the beginning of the dubbed part.

Only the following operations are allowed while transferring (dubbing):

- Stopping transfer (One Touch or GUI Transfer) by pressing and holding [RETURN] for about 3 seconds or more.
- Stopping transfer (One Touch or Manual Transfer) by pressing [■, STOP].
- Turning the unit on/off (One Touch Transfer)

When transfer (dubbing) is started, the following operations also start automatically

- “OSD” on VHS MENU→ “OFF” (→ 54) (One Touch, GUI or Manual Transfer)
- Recording channel indicator on DVD→ “TP” (One Touch or GUI Transfer)

■ Caution for transfer (dubbing) from DVD to VHS

- Copy-protected discs cannot be dubbed. Most discs are copy-protected to prevent illegal reproduction and they cannot be recorded.

Only the following operations are allowed while transferring (dubbing):

- Stopping transfer (One Touch or GUI Transfer) by pressing and holding [RETURN] for about 3 seconds or more.
- Stopping transfer (One Touch or Manual Transfer) by pressing [■, STOP].
- Turning the unit on/off (One Touch Transfer)

When transfer (dubbing) is started, the following operations also start automatically

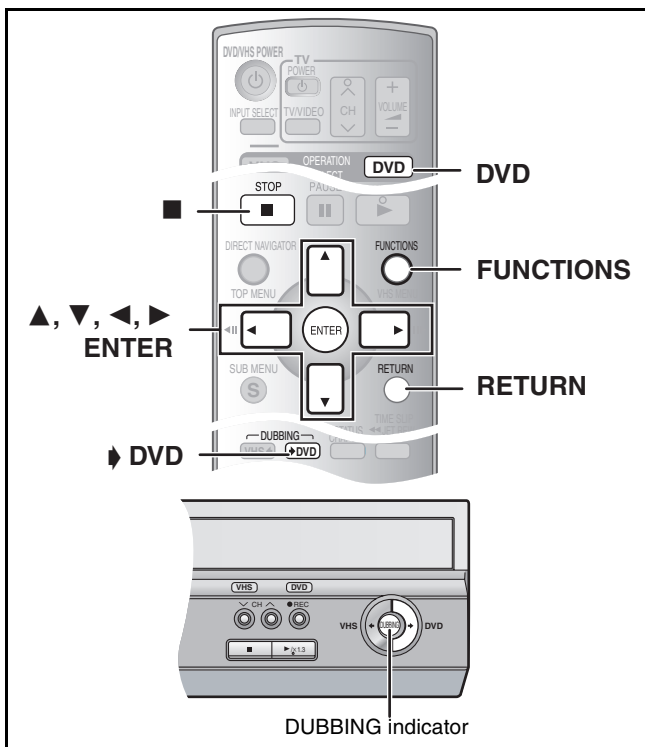
- “Status Messages” on Display→ “Off” (→ 45) (One Touch, GUI or Manual Transfer)
- Recording channel indicator on VHS→ “DC” (One Touch or GUI Transfer)
- Audio output when playing back DVD→ Stereo (L R) **RAM** (One Touch, GUI or Manual Transfer)

When the “PB” indication flashes on the DVD side of the unit's display, the playback location of the disc is recorded by the Resume Function (→ 21). If you start transferring (dubbing) at this time, the transfer (dubbing) is executed from the top of the title which contains the starting position of playback to the end of the disc.

Transferring (Dubbing)



Transfer (Dubbing) from VHS



One Touch Transfer (Dubbing) (VHS → DVD)

RAM -R -RW(V) +R

You can transfer (dub) programs recorded on a tape onto a disc* with one stroke of the button.

In One Touch Transfer (Dubbing), programs are automatically transferred (dubbed) onto the disc from the location of playback at the time when the transfer (dubbing) of the tape starts.

* Available discs for transfer (dubbing) from tape are DVD-RAM, non-finalized DVD-R, DVD-RW (DVD-Video format) and +R.

Preparation

- Select the unit viewing channel (e.g. AV input) on the TV.

DVD

- Release protection (disc → 30, cartridge → 30). **RAM**
- Insert a disc and confirm there is sufficient empty space for recording on it. (→ 8, 47)
- Select the recording mode. (→ 25)
- When SAP broadcast program is played back on VHS, select the audio to be recorded on disc in "Select MTS" in the "SETUP" menu. (→ 44) **-R -RW(V) +R**

VHS

- Insert the video cassette containing the program to be copied (→ 48).

- 1 While both DVD and VHS are stopped
Press and hold [DVD, DUBBING] for about 3 seconds or more (until "START" on the unit's display terminates flashing).

On the main unit, press [DVD].

- Check if transfer (dubbing) starts properly.
- The "DUBBING" indicator on the main unit lights.
- Dub is automatically completed when the tape reaches its end or the disc becomes full.



To stop transfer (dubbing) in the middle

Press [STOP] or press and hold [RETURN] for about 3 seconds or more.

Note

- While One Touch Transfer (Dubbing) is activated, a scheduled recording cannot be started.
- When the transfer (dubbing) is not started or not executed, the "DUBBING" indicator blinks for about 7 seconds. Check if the unit is properly prepared.

Dividing a title to be dubbed

In One Touch Transfer (Dubbing) from VHS to DVD, the title is divided by index signal detected and then recorded. You can search desired titles with Direct Navigator's Title View (→ 33) after transfer (dub) to DVD.

- Titles recorded within 15 minutes (25 minutes in VP mode) of each other may not be divided properly.
- The recording time may become longer than the original title depending on the number of index signals.

If you want to transfer (dub) without dividing the contents into titles, follow the methods below.

- Set "Time Limit" to "On" on the GUI transfer (→ below).
- Manual transfer (→ 58).

GUI (Graphical User Interface) Transfer (Dubbing)

RAM -R -RW(V) +R

You can transfer (dub) programs recorded on a tape onto a disc** from the location* of playback as of the transfer (dubbing) start of the tape.

* When you set the recording mode to "FR" and "Time Limit" to "Off", you can transfer (dub) the whole tape from the beginning to the end. (→ 58)

** Available discs for transfer (dubbing) from tape are DVD-RAM, non-finalized DVD-R, DVD-RW (DVD-Video format) and +R.

Preparation

- Select the unit viewing channel (e.g. AV input) on the TV.

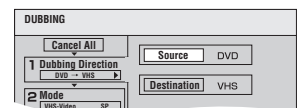
DVD

- Release protection (disc → 30, cartridge → 30). **RAM**
- Insert a disc and confirm there is sufficient empty space for recording on it. (→ 8, 47)
- When SAP broadcast program is played back on VHS, select the audio to be recorded on discs in "Select MTS" in the "SETUP" menu. (→ 44) **-R -RW(V) +R**

VHS

- Insert the video cassette containing the program to be copied (→ 48).

- 1 Press [DVD].
- 2 While both DVD and VHS are stopped
Press [FUNCTIONS].
- 3 Select "DUBBING" with [▲, ▼] and press [ENTER].
- 4 Set the transfer (dubbing) direction.



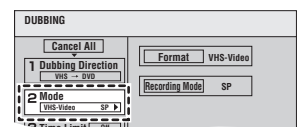
- Set "Source" to "VHS".
- If you are not going to change the dub direction, press [▼], then skip to step 5.

To change the setting

- (1) Make sure "Dubbing Direction" is selected and press [▶].
- (2) Make sure "Source" is selected and press [ENTER].
- (3) Press [▲, ▼] to select "VHS" and press [ENTER].
 - When you set "Source" to "VHS", "DVD" is automatically selected on "Destination".
- (4) Press [◀].
- (5) Press [▼].

- 5 Set the recording mode.

- If you are not going to change the recording mode, press [▼], then skip to step 6.



To change the setting

- (1) Make sure "Mode" is selected and press [▶].
- (2) Make sure "Recording Mode" is selected and press [ENTER].

Transferring (Dubbing)



(3) Select recording mode (XP, SP, LP, EP or FR) with [▲, ▼] and press [ENTER].

- About FR mode (→ below)

(4) Press [◀].

(5) Press [▼].

6 Set the time limit.

- If you are not going to change the recording time, press [▼], then skip to step 7.

■ To change the setting

(1) Make sure "Time Limit" is selected and press [▼].

(2) Make sure "Time Limit" is selected and press [ENTER].

(3) Select time limit ("On" or "Off") with [▲, ▼] and press [ENTER].

- "When you select "Off", proceed to Step (6) below.

(4) Press [▲, ▼] to select "Set time" and press [ENTER].

(5) Press [◀, ▶] to select "Hour" and "Min." and press [▲, ▼] to set the recording time, and then press [ENTER].

- You can also set the set time with the numeric buttons.

- Maximum recording time is 8 hours.

(6) Press [◀].

(7) Press [▼].

7 Make sure "Start Dubbing" is selected and press [ENTER].

- The confirmation screen appears.

8 Select "Yes" with [◀] and press [ENTER].

- Transfer (dubbing) is started.
- Transfer (dubbing) is automatically stopped when the tape reaches the end or the remaining capacity of the disc is filled. (A message appears on the TV screen and then disappears a few seconds later.)

■ To stop transfer (dubbing) in the middle

Press and hold [RETURN] for about 3 seconds or more.

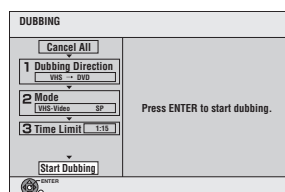
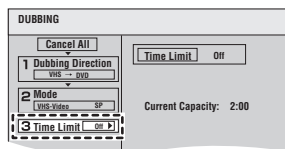
■ About FR Mode

When "Time Limit" is set to "Off" in Step 6 above:

- The recording mode is automatically selected by estimating the remaining capacity of the disc for transfer (dubbing) of only the recorded parts in the video cassette (unrecorded parts will not be recorded).
- When you press [ENTER] to start transfer (dub), the tape is automatically fast-forwarded to the end and then fast-rewound to the beginning before the transfer (dubbing) is actually started. It may take time to start transfer (dub). If the remaining capacity of the disc is insufficient, the transfer (dubbing) will be stopped in the middle.
- The recording is divided into titles every time the tape index signals are detected.

When "Time Limit" is set to "On" in Step 6 above:

- The recording mode is automatically determined by estimating the remaining capacity of the disc for transfer (dubbing) of the contents equivalent to the recording time set from the start point of the transfer (dubbing) on the video cassette (unrecorded parts will also be recorded).
- The recording is not divided into titles.



Manual Transfer (Dubbing)

RAM -R -RW(V) +R

You can transfer (dub) programs recorded on a tape onto a disc* by specifying the recording parts while watching them.

- * Available discs for transfer (dubbing) from tape are DVD-RAM, non-finalized DVD-R, DVD-RW (DVD-Video format) and +R.

Preparation

- Select the unit viewing channel (e.g. AV input) on the TV.

DVD

- Release protection (disc → 30, cartridge → 30). **RAM**
- Insert a disc and confirm there is sufficient empty space for recording on it. (→ 8, 47)

VHS

- Insert the video cassette containing the program to be copied. (→ 48)
- Check the channel. If "DC" channel is selected, transfer (dubbing) does not work properly.
 - When the "DC" channel is selected on VHS, you cannot select the "TP" channel on DVD.

1 Press [VHS] and press [▶, PLAY].

- Start playing the video cassette and find the start point of the recording.
- Select the audio to be played (the audio to be recorded) beforehand.
- The audio from the TV is recorded. To record your favorite audio, select the audio by pressing [AUDIO]. (→ 55)

2 Press [II, PAUSE] at the start point of the recording.

3 Press [DVD].

4 Select "TP" channel with [INPUT SELECT] or [CH, ▲, ▼].

- The VHS picture is displayed on the TV.

5 Press [REC MODE] to select the recording mode. (→ 25)

6 Press [●, REC].

- Disc recording and VHS play start at the same time.

To pause or stop Manual Transfer (Dubbing)

You cannot stop or pause DVD and VHS at the same time.

■ To pause or stop recording

Press [DVD] and [II, PAUSE] or [■, STOP].

■ To pause or stop play

Press [VHS] and press [II, PAUSE] or [■, STOP].

Note

- When the transfer (dubbing) is already started, you can switch the DVD/VHS output manually.

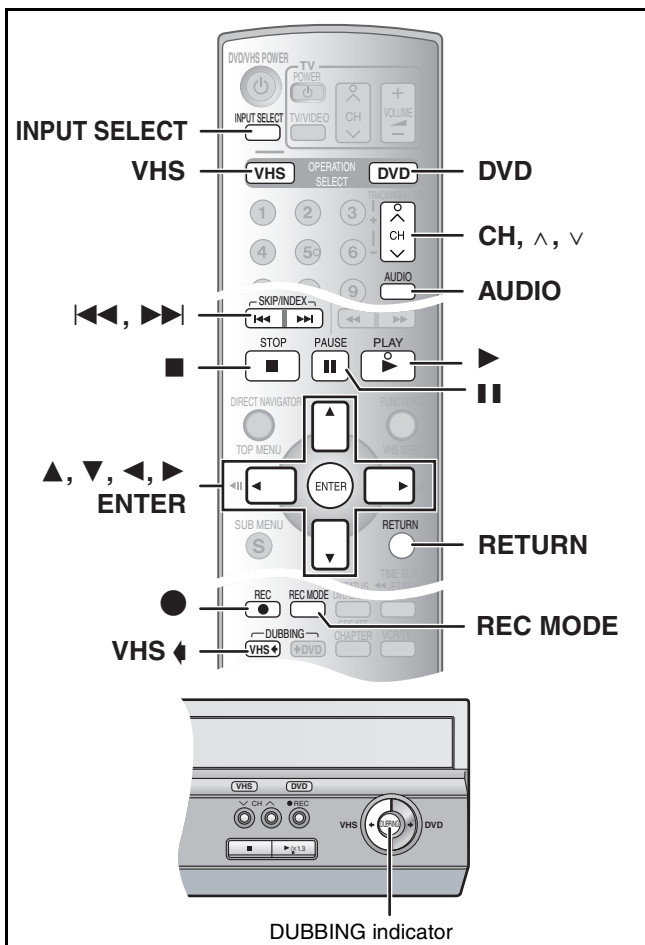
■ About TP channel

(TP: Dubbing input channel)

When the TP channel is selected, it becomes possible for DVD to receive audio and video signals from VHS. This enables dubbing from VHS to DVD.

- The TP channel can be selected by pressing [DVD] and pressing [INPUT SELECT] or [CH, ▲, ▼] several times.
- When you play back a tape after turning the channel to "TP", the picture on VHS is displayed on the TV screen. Utilizing this feature, you can enjoy the picture on the tape in progressive output. (→ 50)
- Compared to the TP channel, the DC channel enables VHS to receive audio and video signals from DVD.
- When the DC channel is selected on VHS, you cannot select the TP channel on DVD.

Transfer (Dubbing) from DVD



One Touch Transfer (dubbing) (DVD → VHS)

You can transfer (dub) titles recorded on a disc* onto a tape with one touch of the button.

In One Touch Transfer (dubbing), all contents on the disc are automatically dubbed onto the tape.

* Available discs for transfer (dubbing) onto tape are **RAM** **-R** **-RW(V)** **+R** **-RW(VR)**.

Preparation

- Select the unit viewing channel (e.g. AV input) on the TV.

DVD

- Insert the disc containing the program to be copied (→ 8).

VHS

- Insert a video cassette with an accidental erasure prevention tab. (→ 48)
- Confirm that the remaining tape time is sufficient for recording. (→ 55)
- Select the recording mode. (→ 51)

When you transfer (dub) a whole disc

Make sure that the DVD is stopped.

- When "PB" flashes on the unit's display of the DVD side, resume function is activated.
In this case, press [■, STOP] to de-activate it. (→ 21)

When you transfer (dub) a title from the beginning of the selected title to the end of the disc

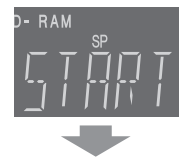
When you transfer (dub) a playlist from the beginning of the selected playlist to the last playlist

- Press [▶, PLAY] to play back the desired title or playlist (→ 37).
- You can transfer (dub) (a title or playlist) while playback is paused by pressing [⏏, PAUSE].
- You cannot transfer (dub) the playlist which is longer than 8 hours. (When you transfer (dub) multiple playlists, the playlist which is longer than 8 hours is omitted.)

1 Press and hold [VHS ⬇, DUBBING] for about 3 seconds or more (until "START" on the unit's display terminates flashing).

On the main unit, press [VHS ⬇].

- Check if transfer (dubbing) starts properly.
- The "DUBBING" indicator on the main unit lights.
- Dubbing is automatically completed when playback of the disc is finished or the tape reaches its end.



To stop transfer (dubbing) in the middle

Press [■, STOP].

Note

- While One Touch Transfer (Dubbing) is activated, a scheduled recording cannot be started.
- When the transfer (dubbing) is not started or not executed, the "DUBBING" indicator blinks for about 7 seconds. Check if the unit is properly prepared.
- If you start transfer (dubbing) when "PB" is blinking on the unit's display, the DVD is dubbed from the beginning of the title which you stopped.

About Recording VISS (→ 54)

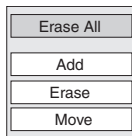
In One Touch Dubbing from DVD to VHS, the index signal is automatically recorded for each title. You can search desired titles with [⏮] or [⏭].

- Index signals will not be recorded automatically in the manual transfer (dubbing) function (→ 62). If you want to record index signals, press [●, REC] on the remote controller at the position you want while transferring (dubbing) in VHS mode (→ 10).

To edit the transfer (dubbing) list

Select the item in step 6 (4). (→ 60)

- 1 Select a desired item with [▲, ▼] and press [SUB MENU].
- 2 Press [▲, ▼] to select the operation and press [ENTER].



Erase All:

Erase all items registered on the transfer (dubbing) list.

- Press [◀, ▶] to select “Yes” and press [ENTER].

Add:

Add new items to the transfer (dubbing) list.

- Press [▲, ▼, ▶, ◀] to select the titles and playlists to be added and press [ENTER].

Erase:

Erase the selected item.

- Press [◀, ▶] to select “Yes” and press [ENTER].
- Multiple editing is possible. (→ 60)

Move:

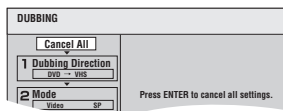
Move selected items or change the order of items on the transfer (dubbing) list.

- Press [▲, ▼] to select the destination and press [ENTER].

To cancel all registered transfer (dubbing) settings and lists

After performing steps 1–4 (→ 60)

- 1 Press [▲, ▼] to select “Cancel All” and press [ENTER].
- 2 Press [◀, ▶] to select “Yes” and press [ENTER].



- The settings and lists may be canceled in the following situations.
 - When a title or a playlist has been recorded or erased at the transfer (dubbing) source.
 - When steps have been taken, for instance, to turn off the unit or open the tray.

Transfer (Dubbing) a DVD-Video, finalized DVD-R, DVD-RW (DVD-Video format), +R

You can transfer (dub) the contents of a disc being played onto a tape for the set time while playing the disc.

Operations and on screen displays during transfer (dubbing) are also recorded.

- Almost all DVD-Video on sale have been treated to prevent illegal copying, and cannot be transferred (dubbed).
- The following cannot be transferred (dubbed): DVD-Audio, Video CD, Audio CD and so on.

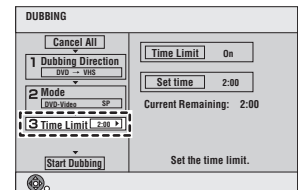
After performing steps 1–5 of “GUI (Graphical User Interface) Transfer (Dubbing)” (→ 60),

6 Set “Time Limit”.

- If you are not going to change the setting, press [▼], then skip to step 7.

Setting the unit to transfer (dub) according to the set time

- (1) Make sure “Time Limit” is selected and press [▶].
- (2) Make sure “Time Limit” is selected and press [ENTER].
- Setting the unit to transfer (dub) all the content on the disc
 - (3) Press [▲, ▼] to select “Off” and press [ENTER].
 - (4) Press [◀].
 - Setting the transfer (dubbing) time
 - (3) Press [▲, ▼] to select “On” and press [ENTER].
 - (4) Press [▲, ▼] to select “Set time” and press [ENTER].
 - (5) Press [◀, ▶] to select “Hour” and “Min.” and press [▲, ▼] to set the recording time, and then press [ENTER].
 - You can also set the set time with the numeric buttons.
 - Maximum recording time is 8 hours.
 - (6) Press [◀].
 - (7) Press [▼].

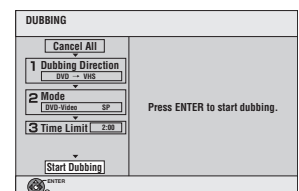


7 Make sure “Start Dubbing” is selected and press [ENTER].

Press [◀] to select “Yes” and press [ENTER] to start transfer (dub).

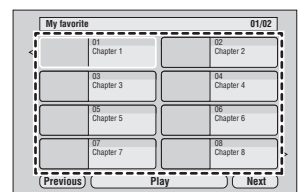
The disc top menu is displayed.

- Disc play automatically begins from title 1 when “First Title” is selected from the “Playback will start with:” menu when finalizing the disc (→ 31).



8 When the top menu is displayed Press [▲, ▼, ▶, ◀] to select the title you want to start transferring (dubbing), and press [ENTER].

- While playing in order, all the titles after the selected title are recorded until the set time.
- After the last title on the disc has finished playing the top menu is recorded until the set time is reached.



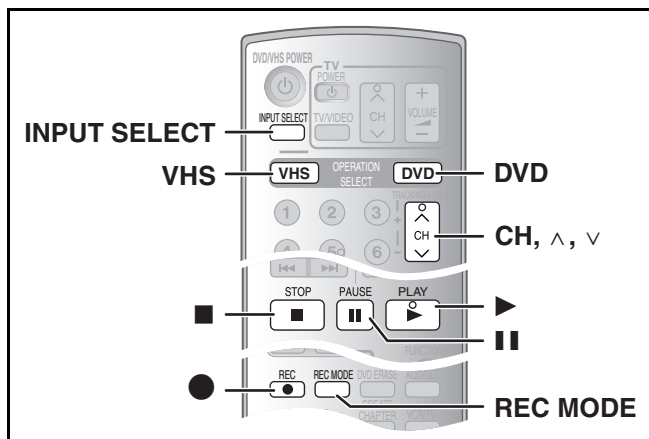
To stop transfer (dubbing) in the middle

Press [■, STOP] or press and hold [RETURN] for about 3 seconds or more.

Note

- The screen on the right (screen saver) is recorded at the beginning.
- It is recorded as 1 title from the start of transfer (dubbing) to the end (even if there are multiple programs).
- If play does not begin automatically or if the top menu does not display automatically, press [▶, PLAY] to start.
- You can select the desired part of the video and then transfer (dub) it while watching the video. (→ 62)





■ About DC channel

(DC: Dubbing input channel)

When the DC channel is selected, it becomes possible for VHS to receive audio and video signals from DVD. This enables dubbing from DVD to VHS.

- The DC channel can be selected by pressing [VHS] and pressing [INPUT SELECT] or [CH, ^, v] several times.
- When you play back a disc after turning the channel to “DC”, the picture on DVD is displayed on the TV screen.
- Contrary to the DC channel, the TP channel enables DVD to receive audio and video signals from VHS.
- When the TP channel is selected on DVD, you cannot select the DC channel on VHS.

■ Manual Transfer (Dubbing)

You can transfer (dub) titles recorded on a disc onto a tape by specifying the recording parts while watching them.

Preparation

- Select the unit viewing channel (e.g. AV input) on the TV.

DVD

- Insert the disc containing the title to be copied (→ 8).
- Check the channel. If “TP” channel is selected, transfer (dubbing) does not work properly.
 - When the “TP” channel is selected on DVD, you cannot select the “DC” channel on VHS.

VHS

- Insert a video cassette with an accidental erasure prevention tab. (→ 48)
- Confirm that the remaining tape time is sufficient for recording. (→ 55)

1 Press [DVD] and press [▶, PLAY].

- Start playing the disc and find the start point of the recording.
- Select the audio to be played (the audio to be recorded) beforehand. **RAM**
- The audio from the TV is recorded. To record your favorite audio, select the audio by pressing [AUDIO]. (→ 23) **RAM**
- When a DVD-R, a DVD-RW (DVD-Video format) or a +R is inserted, you cannot select the audio.

2 Press [⏏, PAUSE] at the start point of the recording.

3 Press [VHS].

4 Select “DC” channel with [INPUT SELECT] or [CH, ^, v].

- The DVD picture is displayed on the TV.

5 Press [▶, PLAY].

- Start playing the video cassette and find the start point of the recording.

6 Press [⏏, PAUSE] at the start point of the recording, then press [●, REC].

- Put the unit in the recording standby mode.

7 Press [REC MODE] to select the recording mode. (→ 51)

8 Press [⏏, PAUSE].

- VHS recording and disc play start at the same time.

To pause or stop Manual Transfer (Dubbing)

You cannot stop or pause DVD and VHS at the same time.

■ To pause or stop recording

Press [VHS] and press [⏏, PAUSE] or [■, STOP].

■ To pause or stop play

Press [DVD] and press [⏏, PAUSE] or [■, STOP].

Note

- When the transfer (dubbing) is already started, you can switch the DVD/VHS output manually.

Recording from an external device

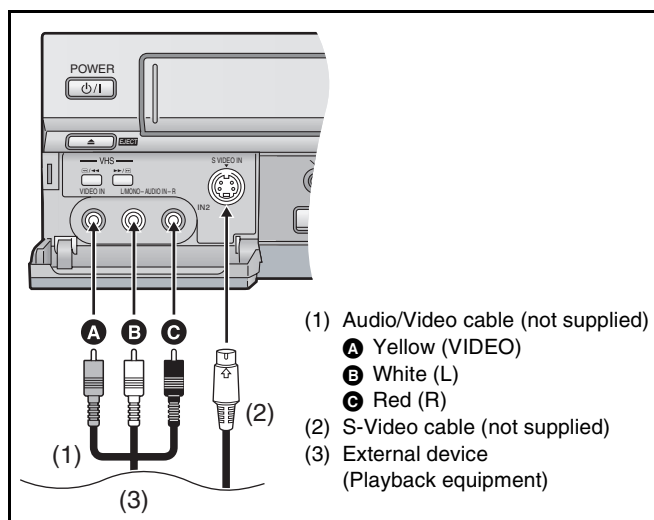
When connecting to the IN2 input terminals on the front of the unit

- You can also connect to the IN1 input terminals on the rear of the unit.

Before connecting any cables, first make sure that the power for the unit and the external device are off. Then, after connecting cables, turn on both.

Note

- When recording using the unit's input terminals, only the sound received at the time of recording will be recorded. As long as secondary audio that is recorded on the media in the external device is not output to the unit in play, it is not recorded.
- If the audio output of the other equipment is monaural, connect to L/MONO. (Both left and right channels are recorded when connected through L/MONO.)
- The S-VIDEO terminal achieves a more vivid picture than the VIDEO terminal.



Preparation

DVD **RAM -R -RW(V) +R**

- Release protection (disc → 30, cartridge → 30). **RAM**
- Press [DVD].

VHS

- Insert a video cassette with an accidental erasure prevention tab. (→ 48)
- Press [VHS].

1 Press [REC MODE] to select the recording mode. (DVD → 25, VHS → 51)

• DVD **RAM -R -RW(V) +R**

- It is also possible to perform Flexible Recording (FR). (→ 26)

2 While stopped

Press [CH, ^, v] or [INPUT SELECT] to select the input channel for the equipment you have connected.

- Select IN1 or IN2.

▶ DVD

Follow the above steps 1 to 2.

3 Start play on the external device.

4 Press [●, REC] at the point where you want to start recording.

▶ VHS

Follow the above steps 1 to 2.

3 Press [▶, PLAY].

- Start playing the video cassette and find the recording start point.

4 Press [||, PAUSE], then press [●, REC].

- Put the unit in recording standby mode.

5 Start play on the external device.

6 Press [||, PAUSE] at the point where you want to start recording.

■ To skip unwanted parts

Press [||, PAUSE] to pause recording. (Press again to restart recording.)

■ To stop recording

Press [■, STOP].

For your reference

- Almost all videos and DVD software on sale have been treated to prevent illegal copying. Such software cannot be recorded.

Glossary

Bitstream

This is a signal compressed and converted into digital form. It is converted back to a multi-channel audio signal, e.g., 5.1-channel, by a decoder.

CPRM (Content Protection for Recordable Media)

CPRM is technology used to protect broadcasts that are allowed to be recorded only once. Such broadcasts can be recorded only with CPRM compatible recorders and discs.

Decoder

A decoder restores the coded audio signals on DVDs to normal. This is called decoding.

Down-mixing

This is the process of remixing the multi-channel audio found on some discs into two channels. It is useful when you want to listen to the 5.1-channel audio recorded on DVDs through your TV's speakers. Some discs prohibit down-mixing. If this is the case, this unit can only output the front two channels.

Dynamic range

Dynamic range is the difference between the lowest level of sound that can be heard above the noise of the equipment and the highest level of sound before distortion occurs. Dynamic range compression means reducing the gap between the loudest and softest sounds. This means you can hear dialog clearly at low volume.

Film and Video

DVD-Videos are recorded using either film or video. The unit can determine which type has been used, then uses the most suitable method of progressive output.

- Film is 24 or 30 frames per second, with motion picture film generally being 24 frames per second.
- Video is 60 fields per second (2 fields making up 1 frame).

Finalize

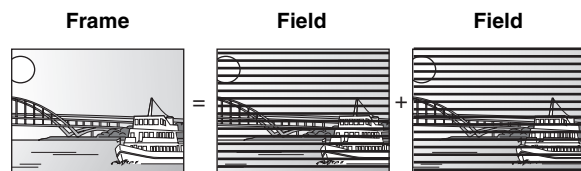
A process that makes play of a recorded CD-R, CD-RW, DVD-R, etc. possible on equipment that can play such media. You can finalize DVD-R, DVD-RW (DVD-Video format) and +R on the unit. After finalizing, the disc becomes play-only and you can no longer record or edit. However, finalized DVD-RW can be formatted to become recordable.

Formatting

Formatting is the process of making media such as DVD-RAM recordable on recording equipment. You can format DVD-RAM and DVD-RW (only as DVD-Video format) on the unit. Formatting irrevocably erases all contents on the disc.

Frame and field

Frame refers to the single images that constitute the video you see on your TV. Each frame consists of 2 fields.



- A frame still shows 2 fields, so there may be some blurring between them, but picture quality is generally better.
- A field still shows less picture information so it may be rougher, but there is no blurring.

JPEG (Joint Photographic Experts Group)

This is a system used for compressing/decoding color still pictures. If you select JPEG as the storage system on digital cameras, etc., the data will be compressed to 1/10–1/100 of its original size. The benefit of JPEG is less deterioration in picture quality considering the degree of compression.

MP3 (MPEG Audio Layer 3)

An audio compression method that compresses audio to approximately one-tenth of its size without any considerable loss of audio quality. You can play MP3s you have recorded onto CD-R and CD-RW.

Pan & Scan/Letterbox

In general, DVD-Video are produced with the intention that they will be viewed on a widescreen TV (16:9 aspect ratio), so images often don't fit regular TVs (4:3 aspect ratio). 2 styles of picture, "Pan & Scan" and "Letterbox", deal with this problem.

Pan & Scan: The sides are cut off so the picture fills the screen.



Letterbox: Black bands appear at the top and bottom of the picture so the picture itself appears in an aspect ratio of 16:9.



Playback control (PBC)

If a Video CD has playback control, you can select scenes and information with menus displayed on the screen. (The unit is compatible with version 2.0 and 1.1.)

Progressive/Interlace

NTSC, the video signal standard, has 480 interlaced (i) scan lines, whereas progressive scanning uses twice the number of scan lines. This is called 480p.

Using progressive output, you can enjoy the high-resolution video recorded on media such as DVD-Video.

Your TV must be compatible to enjoy progressive video.

Protection

You can prevent accidental erasure by setting writing protection or erasure protection.

Sampling frequency

Sampling is the process of converting the heights of sound wave (analog signal) samples taken at set periods into digits (digital encoding). Sampling frequency is the number of samples taken per second, so larger numbers mean more faithful reproduction of the original sound.

Thumbnail

This refers to a miniature representation of a picture used to display multiple pictures in the form of a list.

TIFF (Tag Image File Format)

This is a system used for compressing/decoding color still pictures, a common format for storing high quality images on digital cameras and other devices.

Frequently asked questions

Set up

		Page
What equipment is necessary to play multi channel surround sound?	• DVD-Video: You can play DVD-Video multi channel surround by digitally connecting an amplifier equipped with a Dolby Digital and a DTS decoder. • DVD-Audio: This unit plays DVD-Audio in 2 channels. You cannot play multi channel surround sound.	15 —
Can the headphones and speakers be directly connected to the unit?	• You cannot directly connect to the unit. Connect through the amplifier etc.	15
The TV has both S-VIDEO IN terminal and COMPONENT VIDEO IN terminals. Which terminal should I connect with?	• We recommend the COMPONENT VIDEO IN terminal. Component signal outputs the color difference signals (Pb/Pr) and luminance signal (Y) separately in order to achieve high fidelity in reproducing colors. If the TV is compatible with progressive output, a high quality picture can be output because the unit's component video output terminal outputs a progressive output signal.	15
Is my TV progressive output compatible?	• All Panasonic TVs that have 480p input terminals are compatible. Consult the manufacturer if you have another brand of TV.	—

Disc

		Page
Can I play DVD-Video, DVD-Audio and Video CDs bought in another country?	• You can play them if the video standard is NTSC. • However, you cannot play DVD-Video if its region number does not include "1" or "ALL".	— 7
Can a DVD-Video that does not have a region number be played?	• The DVD-Video region number indicates the disc conforms to a standard. You cannot play discs that do not have a region number.	—
Please tell me about DVD-R, DVD-RW, +R and +RW compatibility with the unit.	• The unit records and plays DVD-R, DVD-RW (DVD-Video format) and +R, and plays DVD-RW (DVD Video Recording format) and +RW. • The unit also records and plays high speed recording compatible DVD-R, DVD-RW, +R discs.	6, 7 6
Please tell me about CD-R and CD-RW compatibility with the unit.	• This unit plays CD-R/CD-RW discs which have been recorded in one of the following standards: CD-DA, Video CD, MP3 and still pictures (JPEG/TIFF). Close the session or finalize the disc after recording. This unit can recognize up to 99 folders (groups) and 999 files (tracks) on a disc with MP3 or still pictures (JPEG/TIFF). • You cannot write to a CD-R or CD-RW with the unit.	7, 23, 24 7

Recording

		Page
Can I record from a commercially purchased video cassette or DVD?	• Most commercially sold video cassettes and DVD are copy protected; therefore, recording is usually not possible.	—
Can DVD-R, DVD-RW (DVD-Video format) and +R recorded on the unit be played on other equipment?	• You can play on compatible equipment such as DVD players after finalizing the disc on this unit. However, depending on the condition of the recording, the quality of the disc and capabilities of the DVD player, play may not be possible.	31
Can I record digital audio signals using the unit?	• You cannot record digital signals. The digital audio terminals on the unit are for output only.	—
Can a digital audio signal from the unit be recorded to other equipment?	• You can record if using the PCM signal. When recording DVD, change the "Digital Audio Output" settings to the following from the SETUP menu. - PCM Down Conversion "On" - Dolby Digital "PCM" - DTS "PCM" - However, only - As long as digital recording from the disc is permitted. - As long as the recording equipment is compatible with 48 kHz of sampling frequency. • You cannot record MP3 signals.	44 —
Can I switch to SAP during recording?	• With DVD-RAM, you can, and the audio recorded also changes. Just press [AUDIO]. • With DVD-R, DVD-RW (DVD-Video format), +R you cannot. Change before recording with "Select MTS" in the SETUP menu.	25 44

Error messages

Common

On the unit's display

Page

H□□, F□□ ("□□" stands for a number.)	- An error has occurred. The number following "H" or "F" depends on the status of the unit. Check the items in the "Error messages" section and the "Troubleshooting guide". If the service number still does not disappear after the check, follow the Reset procedure described below. Reset procedure: ("The unit is on but cannot be operated." → 68) - If the service numbers fail to clear, note the service numbers and contact a qualified service person.	–
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DVD

On the TV

Page

Cannot finish recording completely.	- The program was copy-protected. - The disc may be full. - There are already 99 recorded titles (+R 49 recorded titles).	–
Cannot play.	You inserted an incompatible disc (Discs recorded in PAL video, etc.).	–
Cannot record on the disc.	The disc may be dirty or scratched.	8
Unable to format.		
Please check the disc.		
Cannot record. Disc is full.	- Create space by erasing any unwanted titles. RAM -RW(V) [Even if you erase recorded content from the DVD-R or +R, there is no increase in disc space. Available disc space on DVD-RW (DVD-Video format) increases only when the last recorded title is erased.] - Use a new disc.	22, 30, 33
Cannot record. The number of titles has exceeded the maximum limit.		–
Error has occurred. Please press ENTER.	Press [ENTER] to start recovery process. You cannot operate the unit while it is recovering ("SLF CHECK" appears on the unit's display).	–
No disc	- You haven't inserted a disc. Correctly insert a disc that the unit can play. - The disc is upside down. If it is a single-sided disc, insert it so the label is facing up.	6, 8 8
Please change the disc.	There may be a problem with the disc. Press [▲, OPEN/CLOSE] to remove it and check it for scratches or dirt. (The unit turns off automatically after you open the tray.)	8
This is a non-recordable disc.	The unit cannot record on the disc you inserted. Insert a DVD-RAM or unfinalized DVD-R, DVD-RW (DVD-Video format) or +R.	–
This disc is not formatted properly.	You inserted an unformatted DVD-RAM or DVD-RW. Format the disc with the unit.	31
⊙	The operation is prohibited by the unit or disc.	21

On the unit's display

Page

□ CHK REMOTE ("□" stands for a number.)	The remote control and main unit are using different codes. Change the code on the remote control.	19
HARD ERR	If there is no change after turning the unit on and off, consult the dealer where the unit was purchased.	–
NO READ	- The disc is dirty or badly scratched. The unit cannot record, play, or edit. - You have used a lens cleaner and it has finished. Press [▲, OPEN/CLOSE] to eject the disc.	8 8
PLEASE WAIT	- Displayed when the unit is started. This is not a malfunction. - The unit is carrying out its recovery process. You cannot operate the unit while "PLEASE WAIT" is displayed.	– –
PROG FULL	There are already 16 scheduled recording programs. Delete unnecessary scheduled recording programs.	29, 53
SLF CHECK	- There was a power failure or the AC plug was disconnected while the unit was on. The unit is carrying out its recovery process. Wait until the message disappears. - If "Quick Start" is set to "On", "PLEASE WAIT" is displayed while the unit is carrying out its recovery process. You cannot operate the unit while this is displayed.	– –
UNSUPPORT	You have inserted a disc the unit cannot play or record on.	7
UNFORMAT	You have inserted an unformatted DVD-RAM or DVD-RW that is unformatted or recorded on other equipment.	31
U59	- The unit is very warm. - The unit switches to standby for safety reasons. Wait for about 30 minutes until the message disappears. Select a position with good ventilation when installing the unit. Do not block the cooling fan on the rear of the unit.	–
U99	The unit fails to operate properly. Press [POWER ⏻/I] on the main unit to switch the unit to standby. Now press [POWER ⏻/I] on the main unit again to turn the unit on.	–

VHS

On the TV

Page

PLEASE PUT IN A VIDEO CASSETTE.	A video cassette is not inserted when recording programs or setting the scheduled recording. Insert a video cassette with an accidental erasure prevention tab.	48
PLEASE SET THE CLOCK.	The clock is not set when recording programs or setting the scheduled recording. Set the clock.	46
PLEASE USE A CASSETTE WITH TAB.	A video cassette without the accidental erasure prevention tab is inserted when recording programs or setting the scheduled recording. Use a video cassette with an accidental erasure prevention tab.	48

Troubleshooting guide

Before requesting service, make the following checks. If you are in doubt about some of the check points, or if the remedies indicated in the chart do not solve the problem, refer to the "Customer Services Directory" on page 73 if you reside in the U.S.A., or refer to "Product information" on page 72 if you reside in Canada. In other areas, consult your dealer.

The following do not indicate a problem with the unit:

- Regular disc rotating sound. The sound of the disc rotating may become louder especially when finalizing a DVD-R, DVD-RW (DVD-Video format) or +R.
- Poor reception due to atmospheric condition.
- Image disturbance during search.
- Periodic interruptions to reception due to satellite broadcasting breaks.
- Operations do not work due to a poor-quality disc. (Try again using a Panasonic disc.)
- The unit freezes due to the activation of one of its safety devices. (Press and hold [POWER ⏻/I] on the main unit for 10 seconds.)

Common

Power		Page
No power	• Insert the AC power supply cord securely into a known active AC outlet.	13
The unit switches to the standby mode.	• This is a power saving feature. Change "Off Timer" in the "SETUP" menu, if you would prefer. • One of the unit's safety devices is activated. Press [POWER ⏻/I] on the main unit to turn the unit on.	43 —
Displays		Page
The display is dim.	• Change "Front Display" in the SETUP menu.	45
"12:00" is flashing on the unit's display.	• Set the clock.	46
The recording time display, the transfer (dubbing) process display and the displayed recording time of MP3 are different from the actual time.	• The time on the unit's display and the remaining recording time on the screen may be indicated less or more than the actual value.	—
	• In DVD-R or +R, the remaining capacity does not increase even if titles are erased.	—
	• Available recording space on a DVD-RW (DVD-Video format) increases only when the last recorded title is erased. It does not increase if other titles are erased.	—
	• If you repeat recording or editing about 200 times or more, the remaining capacity of the DVD-R or the +R is reduced and then recording or editing may be disabled.	—
	• The time during fast forward and rewind, or the process during transfer (dub) may not be displayed accurately.	—
Compared to the actual recorded time, the elapsed time displayed is less.	• The displayed recording/play time is converted from the number of frames at 29.97 frames (equal to 0.999 seconds) to one second. There will be a slight difference between the time displayed and the actual elapsed time (e.g., actual one-hour elapsed time may display as approximately 59 minutes 56 seconds). This does not affect the recording.	—
The tape counter isn't changing.	• The tape counter does not change while playing unrecorded parts. The "second" display changes as follows: 	—
	• The unit's display also appears like this if the tape is dirty or damaged. Consult your dealer if this is the case.	—

Operation		Page
Cannot operate the TV.	- Change manufacturer code. Some TVs cannot be operated even if you change the code. - Press [TV/VIDEO] to change the input mode to "TV".	19 26, 51
Cannot operate the DVD.	Press [DVD] when operating DVD.	10
Cannot operate the VHS.	Press [VHS] when operating VHS.	10
The remote control doesn't work.	- The remote control code is wrong. Change to the correct code. - The batteries are depleted. Replace them with new ones. - Point the remote control at the remote control sensor on the main unit. - Remove obstacles between the remote control and main unit. - Don't place the signal sensor in direct sunlight or in areas that may be subject to sunlight exposure. - If you repeatedly insert discs or turn the unit on and off about 50 times or more, the recording or editing of DVD-R, DVD-RW (DVD-Video format), +R may be disabled.	19 11 11 — — —
The unit is on but cannot be operated.	- Some operations are prohibited by the disc. - The unit is warm ("U59" appears on the unit's display). Wait until "U59" disappears. - One of the unit's safety devices may have been activated. Reset the unit as follows: (1) Press [POWER ] on the main unit to switch to standby. If the unit doesn't switch to standby, press and hold [POWER ] on the main unit for about 10 seconds. The unit is forcibly switched to standby. Alternatively, disconnect the AC power supply cord, wait for about 1 minute, then reconnect it. (2) Press [POWER ] to turn the unit on.	— — —
Cannot eject a disc.	- The unit is recording - The unit may have a problem. While the unit is off, hold down [■] and [CH, ^] on DVD side of the main unit simultaneously for about 5 seconds. Remove the disc and consult the dealer.	— —
Startup is slow	- Make sure that "Quick Start" is set to "On". Even if "Quick start" is set to "On", startup is slow if the clock is not set, there was a power failure or the AC plug has just been connected. - A few dozen seconds after turning on the unit, you can play a disc or start recording to discs other than DVD-RAM. - Startup takes time for a few minutes after 4:00 a.m. due to system maintenance of this unit.	43 — —
Takes time to read DVD-RAM	It may take time to read a disc if it is being used for the first time in this unit or it has not been used for a long time.	—

Picture		Page
TV reception worsens after connecting the unit.	This can occur because the signals are being divided between the unit and other equipment. It can be solved by using a signal booster, available from audio-visual suppliers.	—
The images from the unit do not appear on the TV.	Make sure that the TV is connected to the VIDEO OUT terminal, S-VIDEO OUT terminal or COMPONENT VIDEO OUT terminals on the unit.	13, 15
Picture is distorted.	- Make sure that the TV's input setting (e.g., VIDEO 1) is correct. - The TV isn't compatible with progressive signals. Press and hold [■] and [▶ DVD, DUBBING] on DVD of the main unit at the same time for about 5 seconds. The setting will change to interlace.	— —

Recording, Scheduled recording, Transfer (dubbing), External input

Page

Scheduled recording does not work properly.	- When connected to cable TV box or satellite receiver, the VCR Plus+ system does not work. - The scheduled recording program is incorrect or different scheduled recording times overlap. Correct the program.	– 29, 53
VCR Plus+ system does not work properly.	- The clock is not correct. Set the clock. - Correct the guide channels with "VCR Plus+ Ch. Setting" in the SETUP menu. - The same guide channel is set to 2 or more channel positions. Set the guide channel correctly or delete unnecessary channels. - Scheduled recording will not be activated during formatting, transfer (dubbing) and other such operations which should not be interrupted when they are being carried out.	46 17 17 –
Scheduled recording does not stop even when [■, STOP] is pressed.	- Press [■, STOP] and then [ENTER] within 5 seconds to turn "⏻" off. Recording stops. - If you start recording immediately after turning on the unit while "Quick Start" is set to "On", you cannot then stop recording for a few seconds.	29, 53 43
The scheduled recording program remains even after recording finishes.	The scheduled recording program remains if set to daily or weekly.	29, 53
Cannot transfer (dub) VHS to DVD.	- The write-protect tab on the cartridge is set to "PROTECT" or the disc is protected with "DISC MANAGEMENT". "TP" channel is not selected on DVD when recording from a video tape to a disc. Select "TP" channel. - Some video tapes on the market (including rental videos) are copy-protected to prevent illegal reproductions. Copy-protected video tapes cannot be properly recorded. - You cannot use the transfer (dubbing) function when the FUNCTIONS window, the Scheduled Recording List screen, the VHS menu screen, etc. are displayed.	30 58 – –
Cannot transfer (dub) DVD to VHS.	- A video cassette without the accidental erasure prevention tab is inserted. Use a video cassette with an accidental erasure prevention tab. "DC" channel is not selected on VHS when recording from a disc to a video tape. Select "DC" channel. - Some DVDs on the market (including rental DVD) are copy-protected to prevent illegal reproductions. Copy-protected DVDs cannot be properly recorded. - You cannot use the transfer (dubbing) function when the FUNCTIONS window, the Scheduled Recording List screen, the VHS menu screen, etc. are displayed.	48 62 – –
The sound level after editing is not equal on DVD and on VHS.	The sound level on DVD and VHS may not match depending on the disc. When the sound level in a particular part of the sound source is soft or loud, the sound may be recorded loudly or softly on a video tape.	–
Stripe-shaped black noise is recorded.	The device in playback is interfering with the TV because the device is too close to the TV. Move the device away from the TV.	–
Cannot record video or sound from the external device.	- The external device is not correctly connected. - The proper external input channel (IN1 or IN2) is not selected.	63 63

■ DVD

DVD Picture		Page
Status messages do not appear.	● Select "Automatic" in "Status Messages" in the SETUP menu.	45
The blue background does not appear.	● Select "On" in "Blue Background" in the SETUP menu.	45
The 4:3 aspect ratio picture expands left and right.	● Use the TV to change the aspect. If your TV does not have that function, set "Progressive" in the Video menu to "Off".	41
Screen size is wrong.	● Check the settings for "TV Type", "4:3 TV Settings for DVD-Video", or "4:3 TV Settings for DVD-RAM" in the SETUP menu.	45
There is a lot of after-image when playing video.	● Set "MPEG-DNR" in the Video menu to "Off".	41
When playing DVD-Video using progressive output, one part of the picture momentarily appears to be doubled up.	● Set "Progressive" in the Video menu to "Off". This problem is caused by the editing method or material used on DVD-Video, but should be corrected if you use interlace output.	41
There is no apparent change in picture quality when adjusted with the Video menu in the on-screen menus.	● The effect cannot be seen with certain types of video.	—

DVD Sound		Page
No sound. Low volume. Distorted sound. Cannot hear the desired audio type.	● Check the connections and "Digital Audio Output" settings. Check the input mode on the amplifier if you have connected one. ● Press [AUDIO] to select the audio. ● Set "V.S.S." in the Audio menu to "Off" in the following cases. - When using discs that do not have surround sound effects such as Karaoke discs. - When playing MTS broadcast titles. ● The disc may have a restriction on the method of audio output. If "D.MIX" does not appear in the display when playing multi-channel DVD-Audio, only audio for the two front channels will be output. Refer to the disc's jacket. DVD-A	13–15, 44 23, 25 41
Cannot switch audio.	● You cannot change the audio type when a DVD-R, a DVD-RW (DVD-Video format) or a +R is in the disc tray. ● You cannot change the audio type when playing a DVD-R, a DVD-RW (DVD-Video format) or a +R. (You can select "Main" or "Secondary Audio Program (SAP)" in "Select MTS" in the SETUP menu before recording.) ● You have used a digital connection. Set "Dolby Digital" to "PCM" or connect using audio cables (analog connection). ● There are discs whose audio cannot be changed because of how the disc was created.	— 44 15, 44 —

DVD Play		Page
Play fails to start even when [▶, PLAY] is pressed. Play starts but then stops immediately.	● Insert the disc correctly with the label facing up. ● The disc is dirty. ● You tried to play a blank disc or a disc that is unplayable on the unit. ● You tried to play a +RW that needs to be finalized on the equipment used for recording. ● When recording to DVD-RAM using EP (8H) mode, play may not be possible on DVD players that are compatible with DVD-RAM. In this case use EP (6H) mode.	8 8 6, 7 — 43
Audio and video momentarily pause.	● This occurs between playlist chapters. ● This occurs as scenes change during Quick View.	— 21
DVD-Video is not played.	● Some DVD-Video cannot be played when you change the ratings level.	43
Alternative sound track and subtitles cannot be selected.	● Multiple languages are not recorded on the disc. ● You may have to use the disc's own menus to select languages.	— 21
No subtitles.	● When progressive output is on, closed captions cannot be displayed. ● Subtitles are not recorded on the disc. ● Set "Subtitle" in the Disc menu to "On".	— — 40
Angle cannot be changed.	● This function depends on software availability. Angles can only be changed during scenes where different angles are recorded.	—
You have forgotten your ratings password.	● With the tray open, keep pressing [●, REC] and [▶/×1.3] on DVD side of the main unit simultaneously for about 5 or more seconds.	—
Quick View does not work.	● This does not work when audio is other than Dolby Digital. ● This does not work when recording is in XP or FR mode.	— —
The resume play function does not work.	● This function only works when "PB" is flashing in the unit's display. ● Memorized positions are canceled when the unit is turned off or when the tray is opened. The memorized position on the playlist is also canceled when the playlist and title are edited.	21 —

DVD recording, scheduled recording

		Page
Cannot record.	• You haven't inserted a disc or the disc you inserted cannot be recorded on. Insert a disc the unit can record onto.	6
	• The disc is unformatted. Format the disc. (RAM -RW(V))	31
	• The write-protect tab on the cartridge is set to "PROTECT" or the disc is protected with "DISC MANAGEMENT".	30
	• Some programs have limitations on the number of times they can be recorded (CPRM).	6, 64
	• The disc is full or nearly full. Erase unneeded titles or use another disc.	22, 30, 33
	• You cannot record on finalized DVD-R, DVD-RW (DVD-Video format), +R or DVD-RW (DVD Video Recording format) discs.	31
	• If you repeatedly insert discs or turn the unit on and off about 50 times or more, the recording or editing of DVD-R, DVD-RW (DVD-Video format), +R may be disabled.	—
	• A DVD-R, DVD-RW (DVD-Video format), +R recorded on the unit may not be recordable on other Panasonic DVD recorders.	—
	• The material you are trying to record is copy-protected.	—
	• Scheduled recording will not be activated when in editing or transfer (dub). Scheduled recording will begin after the editing/transfer (dub) is finished.	—
A part or whole of a recorded title has been lost.	• If the power shuts down or the plug is disconnected from the household AC outlet while recording or editing, the program may be lost or the disc may become unusable. We cannot offer any guarantee regarding lost titles or discs. You will have to format the disc (RAM -RW(V)) or use a new disc.	—

DVD Edit

		Page
Cannot format.	• The disc is dirty. Wipe with a damp cloth and then wipe dry.	8
	• You tried formatting a disc that is not compatible with the unit.	7
Cannot create chapters.	• The unit writes the chapter division information to the disc when you turn it off or remove the disc. The information is not written if there is an interruption in the power before this.	—
Cannot mark the start point or the end point during "Shorten Title" operation.	• These operations are not possible with still pictures.	—
	• You cannot set points if they are too close to each other. You cannot set an end point before a start point.	—
Cannot erase chapters.	• When the chapter is too short to erase, use "Combine Chapters" to make the chapter longer.	35
The available recording time doesn't increase even after erasing recordings on the disc.	• Available recording space on the DVD-R or the +R does not increase even after erasing previously recorded titles.	—
	• Available recording space on a DVD-RW (DVD-Video format) increases only when the last recorded title is erased. It does not increase if other titles are erased.	—
Cannot create a playlist.	• You cannot select all the chapters in a title at once as the source of playlist edition if the title also includes still pictures. Select them individually.	—

VHS

VHS Picture

		Page
OSD messages do not appear.	• Go to VHS MENU and select "ON" in "OSD". Press [STATUS] to show the on-screen messages constantly.	54, 55
The blue back appears during play.	• You are playing a blank or poor quality part of the tape.	—
	• You can damage the unit if you play dirty or damaged tapes and this can cause the blue back to appear. Consult your dealer.	—

VHS Sound

		Page
Cannot hear the desired audio type.	• Press [AUDIO] to select the audio.	55
There is noise when playing a video tape.	• Adjust the tracking.	50
	• The tape is old or damaged.	—

VHS Play

		Page
Cannot play.	• Tapes recorded under a TV system other than NTSC (PAL, SECAM, etc.) cannot be played.	—
The playback screen flickers.	• The video head is dirty.	—
	• The tape is too old or damaged.	—

VHS Recording, scheduled recording

		Page
"  flashes when I try to start recording.	• The erasure prevention tab has been removed. Cover the hole with adhesive tape.	48
Cannot record.		
Cannot record TV program.	• The desired channel is not selected. Select the desired TV program.	—

Reference

Product Service

1. **Damage requiring service** — The unit should be serviced by qualified service personnel if:
 - (a) The AC power supply cord or AC adaptor has been damaged; or
 - (b) Objects or liquids have gotten into the unit; or
 - (c) The unit has been exposed to rain; or
 - (d) The unit does not operate normally or exhibits a marked change in performance; or
 - (e) The unit has been dropped or the cabinet damaged.
2. **Servicing** — Do not attempt to service the unit beyond that described in these operating instructions. Refer all other servicing to authorized servicing personnel.
3. **Replacement parts** — When parts need replacing ensure the servicer uses parts specified by the manufacturer or parts that have the same characteristics as the original parts. Unauthorized substitutes may result in fire, electric shock, or other hazards.
4. **Safety check** — After repairs or service, ask the servicer to perform safety checks to confirm that the unit is in proper working condition.

■ Product information

For product information or assistance with product operation:

In the U.S.A., refer to "Customer Services Directory" on page 73.

In Canada, contact the Panasonic Canada Inc. Customer Care Centre at 1-800-561-5505, or visit the website (www.panasonic.ca), or an authorized Servicentre closest to you.

The model number and serial number of this product can be found on either the back or the bottom of the unit. Please note them in the space provided below and keep for future reference.

MODEL NUMBER _____ DMR-ES30V _____

SERIAL NUMBER _____

User memo:

DATE OF PURCHASE _____

DEALER NAME _____

DEALER ADDRESS _____

TELEPHONE NUMBER _____

Reference

Limited Warranty (ONLY FOR U.S.A.)

**Panasonic Consumer Electronics Company,
Division of Panasonic Corporation of North America**
One Panasonic Way Secaucus, New Jersey 07094

Panasonic Puerto Rico, Inc.
Ave. 65 de Infantería, Km. 9.5
San Gabriel Industrial Park, Carolina, Puerto Rico 00985

Panasonic DVD Recorder Limited Warranty

Limited Warranty Coverage

If your product does not work properly because of a defect in materials or workmanship, Panasonic Consumer Electronics Company or Panasonic Puerto Rico, Inc. (collectively referred to as "the warrantor") will, for the length of the period indicated on the chart below, which starts with the date of original purchase ("warranty period"), at its option either (a) repair your product with new or refurbished parts, or (b) replace it with a new or a refurbished product. The decision to repair or replace will be made by the warrantor.

Product or Part Name	Parts	Labor
DVD Recorder	One (1) Year	One (1) Year
Rechargeable Batteries, DVD-RAM Disc (in exchange for defective item)	Ten (10) Days	Not Applicable

During the "Labor" warranty period there will be no charge for labor. During the "Parts" warranty period, there will be no charge for parts. You must carry-in or mail-in your product during the warranty period. If non-rechargeable batteries are included, they are not warranted. This warranty only applies to products purchased and serviced in the United States or Puerto Rico. This warranty is extended only to the original purchaser of a new product which was not sold "as is". A purchase receipt or other proof of the original purchase date is required for warranty service.

Carry-In or Mail-In Service

For Carry-In or Mail-In Service in the United States call 1-800-211-PANA (7262) or visit Panasonic Web Site: <http://www.panasonic.com>
For assistance in Puerto Rico call Panasonic Puerto Rico, Inc. (787)-750-4300 or fax (787)-768-2910.

Limited Warranty Limits And Exclusions

This warranty ONLY COVERS failures due to defects in materials or workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage. The warranty ALSO DOES NOT COVER damages which occurred in shipment, or failures which are caused by products not supplied by the warrantor, or failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, set-up adjustments, misadjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, or commercial use (such as in a hotel, office, restaurant, or other business), rental use of the product, service by anyone other than a Factory Servicenter or other Authorized Servicer, or damage that is attributable to acts of God.

THERE ARE NO EXPRESS WARRANTIES EXCEPT AS LISTED UNDER "LIMITED WARRANTY COVERAGE". THE WARRANTOR IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY. (As examples, this excludes damages for lost time, travel to and from the servicer, loss of media or images, data or other recorded content. The items listed are not exclusive, but are for illustration only.) **ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTY OF MERCHANTABILITY, ARE LIMITED TO THE PERIOD OF THE LIMITED WARRANTY.**

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

This warranty gives you specific legal rights and you may also have other rights which vary from state to state. If a problem with this product develops during or after the warranty period, you may contact your dealer or Servicenter. If the problem is not handled to your satisfaction, then write to the warrantor's Consumer Affairs Department at the addresses listed for the warrantor.

PARTS AND SERVICE WHICH ARE NOT COVERED BY THIS LIMITED WARRANTY ARE YOUR RESPONSIBILITY.

Customer Services Directory

Obtain Product Information and Operating Assistance; locate your nearest Dealer or Servicenter; purchase Parts and Accessories; or make Customer Service and Literature requests by visiting our Web Site at:

<http://www.panasonic.com/consumersupport>

or, contact us via the web at:

<http://www.panasonic.com/contactinfo>

You may also contact us directly at:

1-800-211-PANA (7262),
Monday-Friday 9 am-9 pm; Saturday-Sunday 10 am-7 pm, EST.

For hearing or speech impaired TTY users, TTY : 1-877-833-8855

Accessory Purchases

Purchase Parts, Accessories and Instruction Books online for all Panasonic Products by visiting our Web Site at:

<http://www.pasc.panasonic.com>

or, send your request by E-mail to:

npcparts@us.panasonic.com

You may also contact us directly at:

1-800-332-5368 (Phone) 1-800-237-9080 (Fax Only) (Monday – Friday 9 am to 8 pm, EST.)

Panasonic Services Company
20421 84th Avenue South, Kent, WA 98032

(We Accept Visa, MasterCard, Discover Card, American Express, and Personal Checks)

For hearing or speech impaired TTY users, TTY : 1-866-605-1277

Service in Puerto Rico

Panasonic Puerto Rico, Inc.

Ave. 65 de Infantería, Km. 9.5, San Gabriel Industrial Park, Carolina, Puerto Rico 00985

Phone (787)750-4300, Fax (787)768-2910

F1003

Reference

Limited Warranty (ONLY FOR CANADA)

Panasonic Canada Inc.
5770 Ambler Drive, Mississauga, Ontario L4W 2T3

PANASONIC/TECHNICS PRODUCT—LIMITED WARRANTY

Panasonic Canada Inc. warrants this product to be free from defects in material and workmanship and agrees to remedy any such defect for a period as stated below from the date of original purchase.

Panasonic DVD Recorder One (1) year, parts and labour

LIMITATIONS AND EXCLUSIONS

This warranty does not apply to products purchased outside Canada or to any product which has been improperly installed, subjected to usage for which the product was not designed, misused or abused, damaged during shipping, or which has been altered or repaired in any way that affects the reliability or detracts from the performance, nor does it cover any product which is used commercially. Dry cell batteries are also excluded from coverage under this warranty.

This warranty is extended to the original end user purchaser only. A purchase receipt or other proof of date of original purchase is required before warranty service is performed.

THIS EXPRESS, LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

IN NO EVENT WILL PANASONIC CANADA INC. BE LIABLE FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES.

In certain instances, some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, or the exclusion of implied warranties, so the above limitations and exclusions may not be applicable.

WARRANTY SERVICE

For product operation and information assistance, please contact your Dealer or our Customer Care Centre at:

Telephone #: (905) 624-5505 Fax #: (905) 238-2360 Web: www.panasonic.ca

For product repairs, please contact one of the following:

- Your Dealer who will inform you of an authorized Servicentre nearest you.
- Our Customer Care Centre at (905) 624-5505 or www.panasonic.ca
- A Panasonic Factory Servicentre listed below:

Richmond,

British Columbia

Panasonic Canada Inc.
12111 Riverside Way
Richmond, BC
V6W 1K8
Tel: (604) 278-4211
Fax: (604) 278-5627

Calgary, Alberta

Panasonic Canada Inc.
6835-8th St. N. E.
Calgary, AB
T2E 7H7
Tel: (403) 295-3955
Fax: (403) 274-5493

Mississauga, Ontario

Panasonic Canada Inc.
5770 Ambler Dr.
Mississauga, ON
L4W 2T3
Tel: (905) 624-8447
Fax: (905) 238-2418

Lachine, Québec

Panasonic Canada Inc.
3075, rue Louis A. Amos
Lachine, QC
H8T 1C4
Tel: (514) 633-8684
Fax: (514) 633-8020

IF YOU SHIP THE PRODUCT TO A SERVICENTRE

Carefully pack and send prepaid, adequately insured and preferably in the original carton.
Include details of the defect claimed, and proof of date of original purchase.

Reference

Specifications

Power Supply:	AC 120×(1 ±10%)V, 50/60 Hz ±10%
Power Consumption:	31 W (Approx. 10 W in Quick start standby mode/Approx. 9 W in power save mode) (Approx. 4 W in Normal standby mode/Approx. 2 W in power save mode)

■ DVD

Recording format	DVD-RAM: DVD Video Recording format DVD-R, DVD-RW: DVD-Video format Video: MPEG2 Audio: Dolby Digital 2 CH
Optical pickup	System with 1 lens, 2 integration units (wavelength: 662 nm for DVD, 795 nm for CD)
Recording disc	DVD-RAM: Ver. 2.0 Ver. 2.1/3×-SPEED DVD-RAM Revision 1.0 Ver. 2.2/5×-SPEED DVD-RAM Revision 2.0 DVD-R: for General Ver. 2.0 for General Ver. 2.0/4×-SPEED DVD-R Revision 1.0 for General Ver. 2.x/8×-SPEED DVD-R Revision 3.0 DVD-RW: Ver. 1.1 Ver. 1.1/2×-SPEED DVD-RW Revision 1.0 Ver. 1.2/4×-SPEED DVD-RW Revision 2.0 +R: Ver. 1.0 Ver. 1.1 Ver. 1.2
Recording mode/ recording time	XP: approx. 10 Mbps/approx. 60 min SP: approx. 5 Mbps/approx. 120 min LP: approx. 2.5 Mbps/approx. 240 min EP: approx. 1.7/1.2 Mbps/approx. 360/480 min (with 4.7 GB disc)
Playable discs	DVD-RAM, DVD-R, DVD-RW, +R, +RW, DVD-Video, DVD-Audio, Video CD, CD-Audio (CD-DA), CD-R/CD-RW (MP3, JPEG, CD-DA, Video CD formatted discs)
Video interface	
Output:	
RCA:	CVBS: 1 Vp-p Zout: 75 ohm
S-Video:	Y: 1 Vp-p, C: 0.286 Vp-p Zout: 75 ohm
RCA (YPbPr):	Y: 1 Vp-p, Pb: 0.7 Vp-p, Pr: 0.7 Vp-p Zout: 75 ohm
Audio interface	
Output:	
RCA:	Standard: 309 mVrms, FS: 2 Vrms at 1 kHz Zout: less than 1 kΩ, Load: 10 kΩ
Digital Audio:	Optical Output connector (PCM, Dolby Digital, DTS)
Video data	
Horizontal resolution:	More than XP: 500 lines SP: 500 lines LP: 500 lines EP: 250 lines
Signal to Noise Ratio:	More than 45 dB
Frequency Response:	XP, SP: 0 dB ±3 dB at 4 MHz (0 dB at 0.1 MHz), (Fine mode) LP, EP: 0 dB ±3 dB at 2 MHz (0 dB at 0.1 MHz), (Fine mode)
Audio data	
Dynamic Range:	Rec/PB: more than 90 dB DVD-Video PB (with LPCM): more than 96 dB CD PB: more than 96 dB
Frequency Response:	XP, SP, LP, EP (6H mode): 20 Hz to 20 kHz (0 dB ±3 dB) EP (8H mode): 20 Hz to 12 kHz (0 dB ±3 dB)
Cross Talk:	More than 60 dB at 1 kHz

LASER Specification

Class 1 LASER Product

Wave Length:	795 nm, 662 nm
Laser Power:	No hazardous radiation is emitted with safety protection

■ VHS

Recording format	VHS Video Cassette System Standard with FM audio
Heads	4 helical scan heads for video 2 helical scan heads for FM audio 1 fixed head for Normal audio
Recording modes/ recording time	NTSC SP: 33.35 mm/s, 120 min NTSC EP: 11.12 mm/s, 360 min (with T-120 cassette)
others	FF/REW: approx. 54 s, Jet REW: approx. 36 s (with T-120 cassette)
Video data	
Horizontal resolution:	More than 200 lines
Signal to Noise Ratio:	More than SP: 40 dB EP: 40 dB
Frequency Response:	SP, EP: -4.5 to 4.0 dB at 2 MHz (0 dB at 0.1 MHz)
Audio data	
Dynamic Range:	Hi-Fi: more than 90 dB
Frequency Response:	Hi-Fi: 20 Hz to 20 kHz (0 dB ±3 dB) Normal SP: 80 Hz to 8 kHz (0 dB ±4 dB) Normal EP: 80 Hz to 4 kHz (-1 dB ±5 dB)
Signal to Noise Ratio:	Hi-Fi: more than 65 dB Normal SP: more than 43 dB Normal EP: more than 41 dB
Cross Talk:	More than 50 dB at 1 kHz (Hi-Fi)
Wow and Flutter:	Hi-Fi: less than 0.005% Normal SP: 0.2% max Normal EP: 0.4% max

■ DVD/VHS Common

Video interface	
TV system:	NTSC
Input:	
L1:	
RCA:	CVBS: 1 Vp-p Zin: 75 ohm
S-Video:	Y: 1 Vp-p, C: 0.286 Vp-p Zin: 75 ohm
L2:	
RCA:	CVBS: 1 Vp-p Zin: 75 ohm
S-Video:	Y: 1 Vp-p, C: 0.286 Vp-p Zin: 75 ohm
Output:	
RCA:	CVBS: 1 Vp-p Zout: 75 ohm
Audio interface	
Input:	
L1:	
RCA:	Standard: 309 mVrms, FS: 2 Vrms at 1 kHz Zin: 22 kΩ
L2:	
RCA:	Standard: 309 mVrms, FS: 2 Vrms at 1 kHz Zin: 22 kΩ
Output:	
RCA:	Standard: 309 mVrms, FS: 2 Vrms at 1 kHz Zout: less than 1 kΩ, Load: 10 kΩ
DVD:	309 mVrms Zout: less than 1 kΩ, Load: 10 kΩ
VHS:	
Tuner RF	
Tuner system/ Channel coverage:	NTSC-M VHF: 2 ch to 13 ch 75 ohm UHF: 14 ch to 69 ch 75 ohm CATV: 5A & A-5 ch to EEE ch 75 ohm One tuner (DVD and VCR common use)
RF converter:	Provide 3ch or 4ch 75 ohm
Dimensions	Approx. 430 mm (W)×89 mm (H)×352 mm (D) [Approx. 16 ¹⁵ / ₁₆ " (W)×3 ⁹ / ₁₆ " (H)×13 ⁷ / ₈ " (D)]
Mass	Approx. 5.8 kg (12.79 lbs.)
Operating Temperature	5°C to 40°C (41°F to 104°F)
Operating Humidity	35% to 80% RH (no condensation)

Note

Mass and dimensions shown are approximate.
Specifications are subject to change without notice.

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Cómo empezar

- Antes de conectar, apague todo equipo y lea las instrucciones correspondientes de funcionamiento.

Referencia

- Las conexiones del equipo descritas sirven en concepto de ejemplo.
- Los equipos periféricos y los cables opcionales se venden por separado si no está indicado de otro modo.

Conexión con un televisor y un VCR

- indica los accesorios incluidos.
- indica los accesorios no incluidos.

■ Conexión (sin cable audio/vídeo)

Conecte por orden numérico de ① a ③.

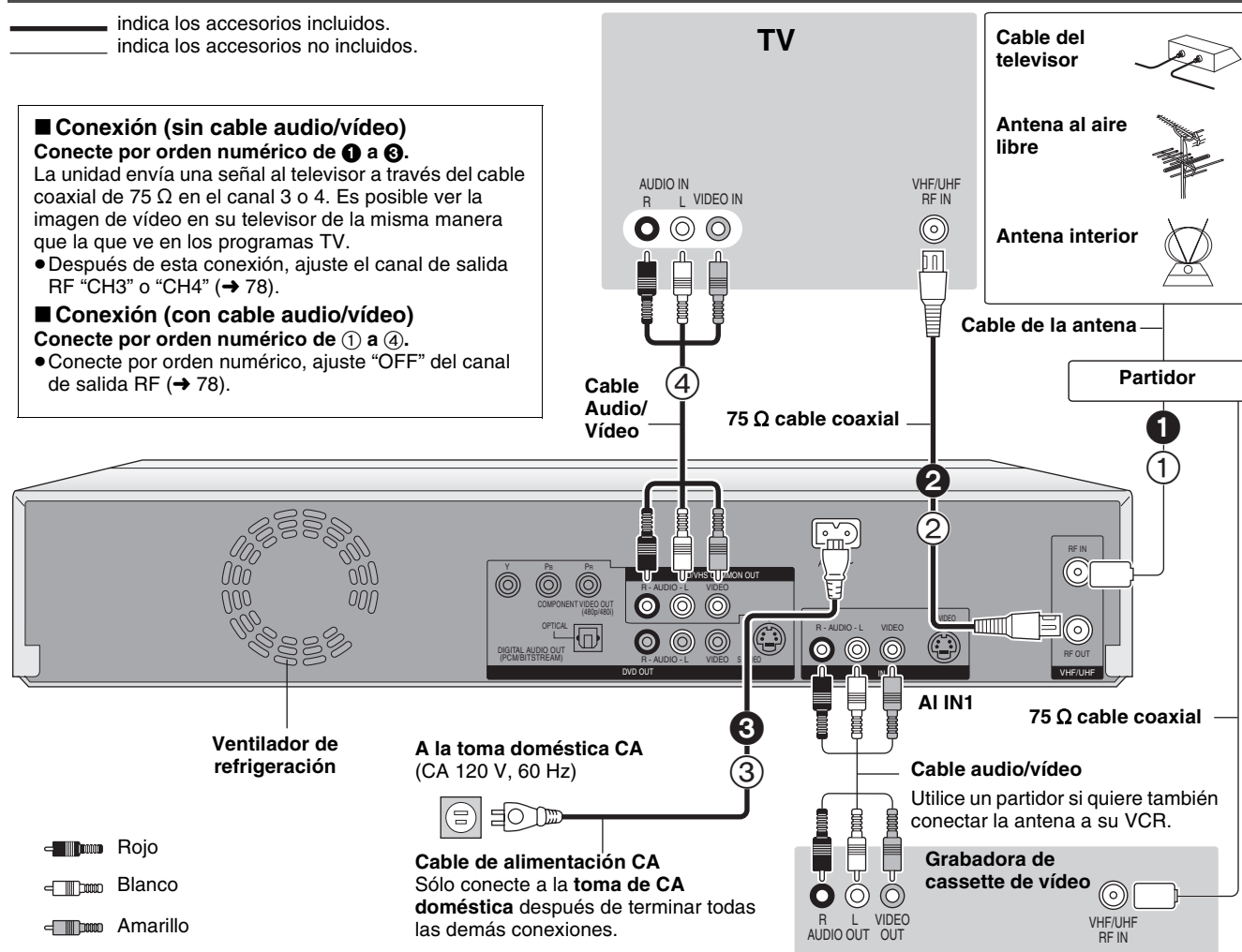
La unidad envía una señal al televisor a través del cable coaxial de 75 Ω en el canal 3 o 4. Es posible ver la imagen de vídeo en su televisor de la misma manera que la que ve en los programas TV.

- Después de esta conexión, ajuste el canal de salida RF "CH3" o "CH4" (→ 78).

■ Conexión (con cable audio/vídeo)

Conecte por orden numérico de ① a ④.

- Conecte por orden numérico, ajuste "OFF" del canal de salida RF (→ 78).



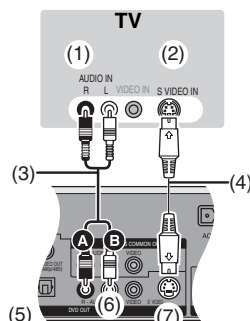
■ Conexión al terminal S-VIDEO IN

Sólo DVD

Terminal S-VIDEO OUT

El terminal S-VIDEO OUT hace conseguir una imagen más nítida que el terminal VIDEO OUT. (Los resultados reales dependen del televisor.)

- (1) Terminales de entrada de audio (L/R)
- (2) Terminal de entrada S-Vídeo
- (3) Cable de audio (no suministrado)
 - A Rojo (R)
 - B Blanco (L)
- (4) Cable S-Vídeo (no suministrado)
- (5) Panel trasero de la unidad
- (6) Terminales de salida de audio (L/R)
- (7) Terminal de salida S-Vídeo



■ Conexión a los terminales COMPONENT VIDEO IN

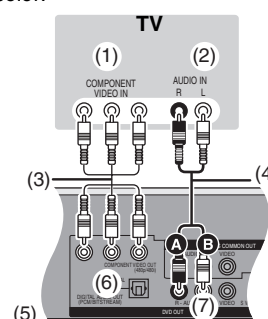
Sólo DVD

Terminal COMPONENT VIDEO OUT

Estos terminales pueden ser usados para la salida sea entrelazada sea progresiva y para proporcionar una imagen más nítida que el terminal de S-VIDEO OUT.

- Conecte a los terminales del mismo color.

- (1) Terminales de entrada componente
- (2) Terminales de entrada de audio (L/R)
- (3) Cable de vídeo del componente (no suministrado)
- (4) Cable de audio (no suministrado)
 - A Rojo (R)
 - B Blanco (L)
- (5) Panel trasero de la unidad
- (6) Terminales COMPONENT VIDEO OUT
- (7) Terminales de salida de audio (L/R)



■ Cuando la unidad no ha de ser usada durante un largo tiempo

Para ahorrar energía, desenchúfela de la toma doméstica CA. Esta unidad consume una pequeña cantidad de corriente aun cuando está apagada.

Consumo de corriente en la espera

		Visualización frontal	
		Automático	Alta
Accionamiento rápido	Act	Aprox. 9 W	Aprox. 10 W
	Des	Aprox. 2 W	Aprox. 4 W

■ Accionamiento rápido

Inicio rápido de 1 s. para grabar en el DVD-RAM*

* A partir del estado de apagado, la grabación en el DVD-RAM inicia cerca de 1 segundo después de pulsar antes [⏏, DVD/VHS POWER] y luego de pulsar secuencialmente [●, REC] (Modo de Accionamiento rápido).

Cómo empezar

Sintonización automática por enchufe

Operaciones preliminares

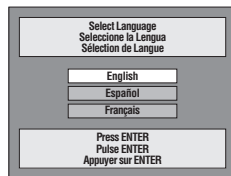
- Encienda el televisor y seleccione la entrada de vídeo correspondiente para conformar las conexiones a esta unidad. (Por ejemplo: la entrada AV, CH3 o CH4)
- Si conecta la unidad a una caja del televisor de cable o a un receptor de satélite, sintonice su PBS local para que funcione el ajuste automático del reloj. Si no hay PBS local, ajuste el reloj manualmente ("Ajustar manualmente el reloj").

- Pulse [DVD].

- 1 Pulse [CH, ^, v].
- 2 Pulse [CH, ^, v] para seleccionar un número de canal de salida RF.

Conexión (sin cable audio/vídeo):
Seleccione "CH3" o "CH4" que visualiza la pantalla a la derecha.

Conexión (con cable audio/vídeo):
Seleccione "OFF".



Visualización de la unidad

Visualización de la unidad

Cada vez que pulsa la tecla:

CH 3 (ajuste predeterminado) ↔ CH4 ↔ OFF

- 3 Utilice [▲, ▼] para seleccionar el idioma y pulse [ENTER].
- 4 Pulse [ENTER] para iniciar la sintonización automática por enchufe.
 - Luego, la unidad procede al ajuste automático del reloj. El temporizador se visualiza cuando finaliza.
- 5 Pulse [ENTER].

Si el reloj adelanta o atrasa una hora respecto a la hora actual Seleccione "-1" o "+1" en "Ajustar del huso horario" en el menú SETUP.

Si la unidad no puede ajustar automáticamente el reloj Ajuste la hora manualmente. ("Ajustar manualmente el reloj")

Ajustes del canal de guía para el sistema VCR Plus+

Ajuste estos canales de guía de manera que se pueda usar el sistema VCR Plus+ para la grabación temporizada. Antes de proceder a los ajustes, prepare el papel que muestra los canales, los nombres de las estaciones y los canales de guía.

por ej.:

Nombre de la estación	Canal de guía*	Número del canal**	Ajuste del canal
CBS	04	04	Innecesario
HBO	33	15	Introduzca el canal 15 sucesivo al canal de guía 33.
Nickelodeon	38	20	Introduzca el canal 20 sucesivo al canal de guía 38.

* Mire en los canales de guía para las estaciones en revistas.

** Apunte todas las estaciones que puede recibir.

- Si ha conectado una caja de televisor de cable o un receptor de satélite, el sistema VCR Plus+ no funciona, así que no debe ajustar los canales de guía.

- 1 Durante la parada Pulse [FUNCTIONS].
- 2 Seleccione "Otras funciones" con [▲, ▼] y pulse [ENTER].
- 3 Seleccione "SETUP" con [▲, ▼] y pulse [ENTER].
- 4 Seleccione "Canal" con [▲, ▼] y pulse [◀, ▶].
- 5 Seleccione "VCR Plus+ Ajuste canal" con [▲, ▼], luego pulse [ENTER].
- 6 Utilice [▲, ▼] para seleccionar el canal de guía que quiere ajustar y pulse [▶].
- 7 Utilice [▲, ▼] para seleccionar el canal correspondiente al de guía y pulse [◀].
 - Para borrar un número, pulse [CANCEL/RESET, *].
 - Repita los pasos 5 y 6 para introducir otros canales.
- 8 Pulse [ENTER].

Selección del tipo de televisor

No debe cambiar el ajuste cuando está conectado a un televisor que tiene el aspecto estándar de 4:3 y no es compatible con la salida progresiva.

- 1 Durante la parada Pulse [FUNCTIONS].
- 2 Seleccione "Otras funciones" con [▲, ▼] y pulse [ENTER].
- 3 Seleccione "SETUP" con [▲, ▼] y pulse [ENTER].
- 4 Seleccione "Pantalla TV" con [▲, ▼] y pulse [◀, ▶].
- 5 Seleccione "Tipo TV" con [▲, ▼], luego pulse [ENTER].

- Aspecto 4:3/Aspecto 16:9:



- 480p/480i:

Seleccione "480p" si el televisor es compatible con la salida progresiva.

- 6 Utilice [▲, ▼] para seleccionar el detalle, luego pulse [ENTER].

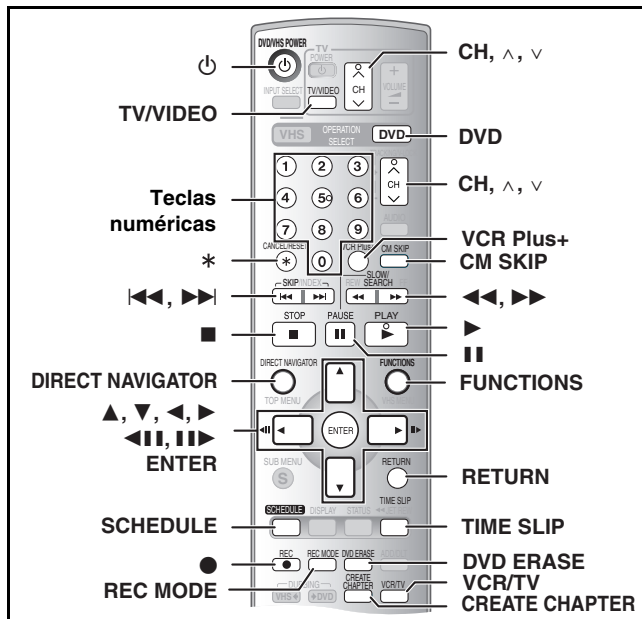
Para volver a la pantalla anterior

Pulse [RETURN].

Para salir de la pantalla

Pulse [RETURN].

Reproducción



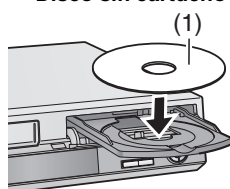
Introducción de discos

- 1 Pulse [▲, OPEN/CLOSE] en la unidad principal para abrir la bandeja.
 - Puede Ud. insertar un disco de cartucho o sin cartucho.
- 2 Pulse [▲, OPEN/CLOSE] en la unidad principal para cerrar la bandeja.
 - Al introducir un DVD-RAM con la lengüeta de protección de escritura ajuste a "PROTECT (PROTEGER)", la reproducción comienza automáticamente.

Nota

- Tiene que cargarse un disco de doble cara con el lado que quiere grabar/reproducir mirando hacia abajo.
- No es posible grabar continuamente de un lado de un disco de doble cara al otro. Es necesario que se expulse el disco y se lo revuelva.
- Cuando utiliza un DVD-RAM de 8 cm (3") o DVD-R de 8 cm (3"), quite el disco del cartucho.

Disco sin cartucho

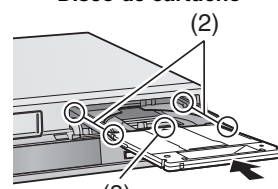


(1) Inserte etiqueta arriba.

(2) Insértelo completamente en su lugar hasta que haga un ruido seco.

(3) Insertar el disco con la etiqueta hacia arriba y la flecha hacia el interior.

Disco de cartucho



Reproducción de los discos

Operaciones preliminares

- Encienda el televisor y seleccione la entrada de vídeo correspondiente para conformar las conexiones a esta unidad.
- Pulse [DVD].

RAM -R -RW(V) +R DVD-A DVD-V -RW(VR) VCD CD

- 1 Pulse [CH, ^, v, DVD/VHS POWER] para encender la unidad.
- 2 Inserte un disco. (→ arriba)
- 3 Pulse [▶, PLAY].

- La bandeja se cierra y comienza la reproducción. (La unidad emplea un tiempo para la adquisición de los datos del disco antes de comenzar la reproducción.)
- La reproducción inicia desde el último título grabado.
 - RAM -R -RW(V) +R -RW(VR)
- La reproducción inicia a partir del comienzo del disco.
 - DVD-A DVD-V VCD CD

Para detener la reproducción

Pulse [■, STOP]. (→ 79, "Función de reanudación") Salva pantalla

- Cuando detiene la reproducción puede aparecer el salva pantalla a la derecha. Pulsando otra vez [■, STOP] es posible utilizar el sintonizador de la unidad para ver la televisión.

DVD-A DVD-V VCD CD

Para interrumpir provisionalmente la reproducción

Pulse [⏏, PAUSE]. (Pulse nuevamente la tecla para reanudar la reproducción.)



■ Cuando en el televisor aparece la pantalla de un menú

VCD

Pulse las teclas numéricas para seleccionar un detalle.

por ej.: "5": [0]→[5] "15": [1]→[5]

DVD-A DVD-V

Pulse [▲, ▼, ◀, ▶] para seleccionar un detalle, luego pulse [ENTER].

● Algunas veces para seleccionar un detalle puede usar las teclas numéricas.

Otros botones usados para hacer funcionar los menús

Lea las instrucciones del disco para más información acerca del funcionamiento.

Nota

● Si aparece "⊘" en el televisor, la unidad o el disco prohíben la operación.

■ Vista rápida (Reproducción ×1.3)

RAM

Puede ser aumentada la velocidad de reproducción sin distorsionar el audio.

Durante la reproducción

Pulse y mantenga [▶, PLAY].



Para volver a la velocidad normal

Pulse [▶, PLAY].

■ Continuación de la reproducción (Función de reanudación)

RAM -R -RW(V) +R DVD-A DVD-V -RW(VR) VCD CD

1 Durante la reproducción

Pulse [■, STOP].

● La reproducción se detiene y en el visualizador de la unidad destella "PB". (Excepto cuando se reproduce desde el Direct Navigator y cuando se reproduce una lista de reproducción.) La unidad memoriza la posición.



2 Pulse [▶, PLAY].

● La reproducción vuelve a comenzar de donde se interrumpió.

Para cancelar la función de reanudación

Pulse varias veces [■, STOP], "PB" desaparece en el visualizador de la unidad.

(Esta función se cancela también cuando apaga la unidad o cuando está abierta la bandeja.)

■ Avance rápido y rebobinado — SEARCH

RAM -R -RW(V) +R DVD-A DVD-V -RW(VR) VCD CD

Durante la reproducción

Pulse [◀◀, SLOW/SEARCH] o [▶▶, SLOW/SEARCH].

● Hay 5 velocidades de búsqueda. Cada vez que se pulsa la tecla la velocidad de búsqueda aumenta.

● Pulse [▶, PLAY] para volver a iniciar la reproducción.



■ Salto

RAM -R -RW(V) +R DVD-A DVD-V -RW(VR) VCD CD

Durante la reproducción o la pausa

Pulse [◀◀, SKIP] o [▶▶, SKIP].

● Cada presión hace aumentar el número de saltos.

■ Reproducción de cámara lenta

RAM -R -RW(V) +R DVD-A (Sólo partes de imagen en movimiento)

DVD-V -RW(VR) VCD

Durante la pausa

Pulse [◀◀, SLOW/SEARCH] o [▶▶, SLOW/SEARCH].

● Cuando continúa la reproducción de cámara lenta durante cerca de 5 minutos, ella se detiene automáticamente (excluir DVD-A DVD-V VCD).

● Hay 5 velocidades de reproducción. Cada vez que se pulsa la tecla la velocidad de reproducción aumenta.

● Pulse [▶, PLAY] para volver a iniciar la reproducción.

● VCD Sólo dirección en avance ([▶▶, SLOW/SEARCH]).

■ Visión cuadro por cuadro

RAM -R -RW(V) +R DVD-A (Sólo partes de imagen en movimiento)

DVD-V -RW(VR) VCD

Durante la pausa

Pulse [◀◀] ([◀]) o [▶▶] ([▶]).

● Cada vez que se pulsa aparece el cuadro siguiente o el anterior.

● Mantenga pulsado para cambiar sucesivamente hacia delante o hacia atrás.

● Pulse [▶, PLAY] para volver a iniciar la reproducción.

● VCD Sólo dirección en avance ([▶▶], [▶]).

■ Reproducción directa

RAM -R -RW(V) +R DVD-A DVD-V -RW(VR) VCD CD

Puede reproducir desde el título, capítulo o pista que selecciona.

Durante la reproducción

Pulse las teclas numéricas para seleccionar el detalle.

CD (Sólo disco MP3, JPEG y TIFF)

por ej.: "5": [0]→[5]

"15": [1]→[5]

"5": [0]→[0]→[5]

"15": [0]→[1]→[5]

DVD-A

Mientras que está visualizado el salva pantalla (→ 78) puede ser especificado un número de grupo.

por ej.: "5": [5]

● Éste sólo funciona cuando está parada (está visualizado el salva pantalla) con algunos discos.

● Reproducir grupos adicionales

Unos discos contienen grupos adicionales. Si aparece una pantalla de contraseña después de seleccionar un grupo, introduzca la contraseña con las teclas numéricas, luego pulse [ENTER]. Por lo que respecta a la contraseña, se refiera también a la envoltura del disco, etc.

■ Borrado de un título que se está reproduciendo

RAM -R -RW(V) +R

Una vez borrado el título no puede ser restablecido. Asegúrese antes de proceder.

1 Durante la reproducción

Pulse [DVD ERASE].

2 Pulse [◀] para seleccionar "Borrar" y pulse [ENTER].

■ Salto CM

RAM -R -RW(V) +R -RW(VR)

Puede saltar por cerca de 1 minuto por cada vez que se pulsa.

Durante la reproducción

Pulse [CM SKIP].

■ Visualización de la imagen TV como imagen en imagen/Selección de la cantidad de tiempo a saltar — Time Slip

RAM -R -RW(V) +R -RW(VR)

Pulse [TIME SLIP] durante la reproducción y abajo a la derecha de la pantalla principal se va a visualizar la pantalla (imagen del televisor) del PIP (de imagen en imagen). Puede ver al mismo tiempo tanto la reproducción de imágenes como las imágenes del televisor. En la pantalla principal, puede también acceder inmediatamente a una escena que quiere ver especificando un cierto tiempo que quiere saltar.

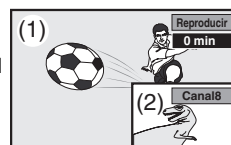
1 Durante la reproducción

Pulse [TIME SLIP].

● Aparece la pantalla PIP (imágenes del televisor).

● Puede cambiar el canal que está recibiendo pulsando [CH, ▲, ▼].

● Escuchará el audio de la reproducción de la pantalla principal.



(1) Imágenes reproducidas
(2) Imágenes actuales en

2 Mientras observa el indicador del tiempo arriba a la derecha

Pulse [▲, ▼] para ajustar el tiempo a saltar, luego pulse [ENTER].

● La reproducción salta por el tiempo que ha especificado.

● El indicador del tiempo se apagará a los 5 segundos aproximadamente, pero ajustando el tiempo volverá a encenderse.

● Pulse [▲, ▼] para cambiar por unidades de 1 minuto. Pulse y mantenga pulsado [▲, ▼] para cambiar por unidades de 10 minutos.



Para despejar la pantalla PIP

Pulse [TIME SLIP].

Referencia

● El fondo azul no aparece en la pantalla PIP.

● No puede cambiar el canal que está recibiendo mientras se está grabando la pantalla PIP.

■ Crear capítulos

RAM

Durante la reproducción

Pulse [CREATE CHAPTER].

● Pulse [◀◀, SKIP] o [▶▶, SKIP] para saltar al comienzo del capítulo.

● No puede activar esta función cuando está ejecutando TIME SLIP (→ 80) o envía (copia).

Grabación de programas televisivos

RAM -R -RW(V) +R

- Puede grabar hasta 99 títulos en un disco (49 títulos **+R**).
- No es posible grabar emisiones digitales que permiten "Grabación sólo una vez" en discos DVD-R, DVD-RW, +R o DVD-RAM de 8 cm (3"). Utilice un DVD-RAM compatible con CPRM.
- La grabación tendrá lugar en un espacio abierto en el disco. Los datos no se sobrescribirán.
- Si no queda espacio en el disco de grabación, será necesario borrar los títulos innecesarios (→ 79) o utilizar un nuevo disco.

Cuando graba en el DVD-R, DVD-RW (formato DVD-Vídeo) o +R

- Cuando graba programas MTS
 - Si no conecte una caja TV de cable
Seleccione "Principal" o "Programa Audio Sec. (SAP)" en "Seleccionar MTS" en el menú SETUP.
 - Si conecte una caja TV de cable
Seleccione "Main" or "SAP" en la caja TV de cable.
- La relación de aspecto de la imagen grabada será 4:3.
- **A fin de reproducir en otra fuente de reproducción un DVD-R, DVD-RW (formato DVD-Vídeo) o +R grabado usando esta unidad, antes el disco ha de ser finalizado.**

Operaciones preliminares

- Quite la protección. **RAM**
- Seleccione un tipo de audio que quiere grabar.
- Pulse [DVD].

1 Pulse [⏻, DVD/VHS POWER] para encender la unidad.

2 Inserte un disco. (→ 78)

- Cuando con esta unidad utiliza un DVD-RAM por la primera vez, formáteelo para garantizar una esmerada grabación.

3 Pulse [CH, ▲, ▼] para seleccionar el canal.

Para seleccionar con las teclas numéricas:

Modo Antena (Ondas hertzianas)

por ej.: "5": [0]→[5] "15": [1]→[5]

Modo Cable TV (Cable)

por ej.: "5": [0]→[0]→[5] "15": [0]→[1]→[5]

"115": [1]→[1]→[5]

4 Pulse [REC MODE] para seleccionar el modo de grabación (XP, SP, LP o EP).

5 Pulse [●, REC] para iniciar la grabación.

- No es posible cambiar de canal o el modo durante la grabación. Es posible cambiarlos cuando la grabación se encuentra en pausa, pero el material se grabará como un título separado.

Para detener temporalmente la grabación

Pulse [■, PAUSE]. (Pulse nuevamente la tecla para reanudar la grabación.)

- El título no puede dividirse en un título separado.
- Puede pulsar también [●, REC] para reiniciar a grabar.

Para detener la grabación

Pulse [■, STOP].

- Grabado como 1 título hasta donde se detiene la posición.
- Una vez terminada la grabación, lleva más o menos 30 segundos para que la unidad complete la información de gestión de la grabación. **-R -RW(V) +R**

■ Modos de grabación y tiempo aproximado de grabación

(Unidad: hora)

	DVD-RAM		DVD-R DVD-RW +R (4,7 GB)
	De un solo lado (4,7 GB)	Doble lado (9,4 GB)	
XP (Alta calidad)	1	2	1
SP (Normal)	2	4	2
LP (Larga duración)	4	8	4
EP (Reproducción de muy larga duración)	8 (6*)	16 (12*)	8 (6*)

- Según el contenido a ser grabado, los tiempos de grabación pueden salir más cortos que los señalados.

* Cuando en el menú SETUP se ha ajustado a "EP (6H)" el "Tiempo de grab. en el modo EP".

La calidad del sonido se baja, en comparación con otros modos de grabación, cuando se usa "EP (8H)".

■ Indicación del tiempo en que se parará la grabación

Durante la grabación

Pulse [●, REC] para seleccionar el tiempo de grabación.

- En la unidad principal, pulse [●, REC] en el DVD.

Visualización de la unidad

Cada vez que pulsa la tecla:

Contador (suprimir) → OFF 0:30 → OFF 1:00 → OFF 1:30

↑ OFF 4:00 ← OFF 3:00 ← OFF 2:00 ←

■ Recepción de las transmisiones televisivas durante la grabación

Operaciones preliminares

- Conexión (sin cable audio/vídeo)
 - Asegúrese de que el indicador TV esté encendido en la visualización de la unidad. Por si no lo estuviese, pulse [VCR/TV] para encenderlo.
- Conexión (con cable audio/vídeo)
 - Pulse [TV/VIDEO] para cambiar el modo de entrada en "TV".

Pulse [CH, ▲, ▼] del televisor para seleccionar los canales TV deseados.

■ Reproducción durante la grabación

RAM

■ Reproducción seguida

Es posible empezar la reproducción desde el comienzo de un título mientras lo sigue grabando.

Durante la grabación o la grabación temporizada

Pulse [▶, PLAY].

- La reproducción inicia mientras que procede la grabación.

■ Grabación y reproducción simultáneas

Puede reproducir un título grabado anteriormente mientras que está grabando otro título.

1 Durante la grabación o la grabación temporizada

Pulse [DIRECT NAVIGATOR].

2 Utilice [▲, ▼, ◀, ▶] para seleccionar el título, luego pulse [ENTER].

- La reproducción inicia mientras que procede la grabación.

Para salir de la pantalla del Direct Navigator

Pulse [DIRECT NAVIGATOR].

■ TIME SLIP

Pulse [TIME SLIP] mientras que graba; la reproducción inicia a partir de 30 segundos antes de aquel momento. Puede iniciar a reproducir incluso antes indicando en el específico indicador un cierto tiempo a saltar.

1 Durante la grabación o la grabación temporizada

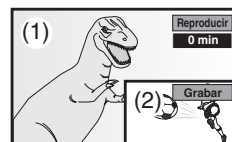
Pulse [TIME SLIP].

- Se visualiza la pantalla PIP (imágenes que se están grabando actualmente).
- En la pantalla principal, la reproducción inicia a partir de 30 segundos antes de aquel momento.
- Escuchará el audio de la reproducción.

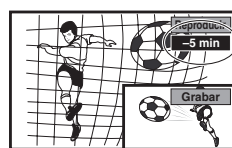
2 Mientras observa el indicador del tiempo arriba a la derecha

Pulse [▲, ▼] para ajustar el tiempo a saltar, luego pulse [ENTER].

- La reproducción salta por el tiempo que ha especificado.
- El indicador del tiempo se apagará a los 5 segundos aproximadamente, pero ajustando el tiempo volverá a encenderse.
- Pulse [▲, ▼] para cambiar por unidades de 1 minuto. Pulse y mantenga pulsado [▲, ▼] para cambiar por unidades de 10 minutos.



- (1) Reproduce las imágenes (30 segundos antes)
- (2) Grabación actual



Para visualizar completamente las imágenes de reproducción

Pulse [TIME SLIP].

- Pulse [TIME SLIP] para volver a la pantalla PIP.

Referencia

- Según la escena, la imagen de la pantalla PIP puede resultar distorsionada o bien parpadear. Sin embargo, esto no afecta la imagen grabada.

Para detener la reproducción y la grabación

1 Pulse [■, STOP]. La reproducción se detiene. (Espere 2 segundos o más.)

2 Pulse [■, STOP]. La grabación se detiene.

- No es posible detener la grabación con [■, STOP] durante la grabación temporizada. Para detener la grabación temporizada pulse [■, STOP], luego [ENTER] dentro de 5 segundos.
 - Puede también seguir pulsando [■] en la unidad principal durante más de 3 segundos para detener la grabación temporizada.

Grabación temporizada

Puede introducir hasta 16 programas con un adelanto de un mes.

Operaciones preliminares

- Quite la protección **RAM**.
- Inserte un disco (→ 78) y asegúrese de que haya bastante espacio vacío para grabarle encima.
- Controle que el reloj esté ajustado a la hora correcta.
- Pulse [DVD].

■ Uso del sistema VCR Plus+

El introducir los números PlusCode® es una manera sencilla de grabación temporizada. Puede encontrar estos códigos en las guías TV de los periódicos y revistas.

- Cuando conecte una caja TV de cable o un receptor de satélite, el sistema VCR Plus+ no funciona. Programe la grabación temporizada manualmente (→ abajo).

- 1 Pulse [VCR Plus+].**
- 2 Pulse las teclas numéricas para introducir el número PlusCode.**
 - Pulse [◀] para volver a la cifra correcta.
- 3 Pulse [ENTER].**
 - Cerciórese del programa y, si lo necesita, corrija usando [▲, ▼, ◀, ▶]. (→ abajo, paso 2)
- 4 Si el programa es correcto Pulse [ENTER].**
 - “⏻” se enciende en el visualizador de la unidad.
 - Repita los pasos 1–4 para programar otras grabaciones.
- 5 Pulse [RETURN].**

■ Programación manual

- Cuando se conecte una caja TV de cable o un receptor de satélite, seleccione el canal en la caja TV de cable o receptor de satélite antes de que comience la grabación temporizada.

- 1 Pulse [SCHEDULE].**
 - Cerciórese de que esté seleccionado “Nueva grabación programada”.
- 2 Pulse [ENTER] para mover y cambiar los detalles usando [▲, ▼, ◀, ▶].**
 - Pueden usarse las teclas numéricas para introducir “Canal”, “Fecha”, “Act.” y “Des.”.
 - **Canal** (Posición del programa/Nombre de la estación de TV)
 - **Fecha**
Puede crear usted un programa diario o semanal. Todos los programas diarios o semanales se cuentan como un solo programa.
 - **Act.** (hora de encendido)/**Des.** (hora final)
Si mantiene pulsado el botón, el tiempo aumentará o disminuirá en incrementos de 30 minutos.
 - **Modo** (Modo de grabación)
Para cambiar el modo de grabación, puede pulsar también [REC MODE].
XP↔SP↔LP↔EP↔FR↔XP... (→ 80)
 - **Nombre tit.**
Pulse [◀, ▶] para seleccionar “Nombre tit.” luego pulse [ENTER].
- 3 Al terminar las correcciones pulse [ENTER].**
 - “⏻” se enciende en el visualizador de la unidad.
 - Para continuar programando:
Seleccione “Nueva grabación programada” y repita los pasos 2–3.
- 4 Pulse [RETURN].**

■ Para detener la grabación mientras un programa está trabajando

Pulse [■, STOP], luego [ENTER] dentro de 5 segundos.

- Puede también mantener pulsado [■] en el DVD de la unidad principal durante 3 o más segundos para detener la grabación.

■ Controle, cambie o borre el programa

Aun cuando la unidad está apagada, puede visualizar la lista de la grabación temporizada pulsando [SCHEDULE].

- 1 Pulse [SCHEDULE].**
- 2 Pulse [▲, ▼] para seleccionar el programa.**
- 3 Pulse [CANCEL/RESET, *] para eliminar, o pulse [ENTER] para cambiar.**
No es posible eliminar programas en fase de grabación. Se visualiza la pantalla de ajuste de la grabación temporizada.
- 4 Si pulsa [ENTER] en el paso 3, Utilice [▲, ▼, ◀, ▶] para cambiar luego pulse [ENTER].**
- 5 Pulse [RETURN].**

Referencia

- Los programas cuya grabación no tuvo éxito no se borran inmediatamente de la lista (destacados en gris), pero se borran automáticamente a las 4 de la mañana dos días después.
- Durante la grabación temporizada puede cambiar el tiempo final mientras el modo de grabación no es “FR”.

■ Precauciones al usar la grabación temporizada en DVD y VHS

La grabación temporizada inicia automáticamente a la hora establecida.

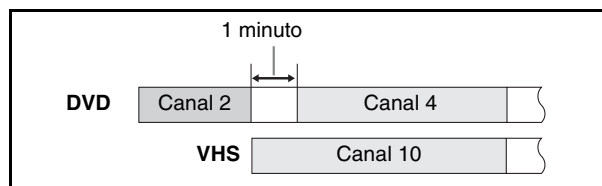
- La grabación temporizada puede iniciar mientras la unidad está tanto apagada como encendida. Cuando la unidad está apagada, el sonido y el vídeo no salen en el televisor.

La grabación temporizada de programas TV no puede ejecutarse en DVD y VHS conjuntamente.

Verifique si el tiempo inicial de la grabación temporizada no se superpone en la pantalla de programación temporizada tanto del DVD (→ arriba) como del VHS (→ 83).

Cuando se superponen los ajustes de la grabación temporizada:

- Cuando el tiempo inicial de las dos grabaciones temporizadas es el mismo, la del DVD tiene la prioridad.
- Cuando están especificados los mismos canales del sintonizador en las grabaciones temporizadas tanto en el DVD como en el VHS, sólo puede iniciar una grabación temporizada.
- Cuando el intervalo entre la primera grabación temporizada y la segunda en el DVD es de 1 minuto o menos como señalado a continuación, la segunda grabación temporizada en el DVD tiene la prioridad sobre la en el VHS aunque su tiempo inicial sea posterior a la grabación temporizada del VHS.



Cuando los ajustes de la grabación temporizada de DVD y VHS se superponen, el del DVD tiene la prioridad.

- “⏻” se enciende en la visualización de la unidad por los dos lados en el modo de espera. Cuando inicia la grabación, “⏻” por el lado de la grabación (lado DVD) queda encendido en tanto que el “⏻” del otro lado (lado VHS) inicia a destellar.

A line drawing of a VHS player. A hand is shown from the left, inserting a cassette tape into the front-loading deck. The player has a control panel on the right side with several buttons and a dial.

Lengüeta



Pulse [■, STOP].

Grabación de programas televisivos

Operaciones preliminares

- Seleccione el canal que ve la imagen de la unidad (por ejemplo la entrada AV) en el televisor.
- Controle que el reloj esté ajustado a la hora correcta. Por si no lo estuviese, ajústelo.
- Pulse [VHS].

1 Inserte un cassette de vídeo que tenga la lengüeta de protección contra el borrado accidental intacta. (→ 82)

2 Pulse [CH, ▲, ▼] para seleccionar un canal TV.

Para seleccionar los canales con las teclas numéricas:

Modo Antena (Ondas hertzianas)

por ej., "5": [0]→[5] "15": [1]→[5]

Modo Cable TV (Cable)

por ej., "5": [0]→[0]→[5] "15": [0]→[1]→[5]

"15": [1]→[1]→[5]

3 Pulse [REC MODE] para seleccionar el modo de grabación.

Cada vez que pulsa la tecla: SP→EP→VP→SP

4 Pulse [●, REC] para iniciar la grabación.

Para detener temporalmente la grabación

Pulse [■, PAUSE]. (Pulse nuevamente la tecla para reanudar la grabación.)

Para detener la grabación

Pulse [■, STOP].

Modos de grabación

SP: Puede grabar la longitud señalada en la cinta.

EP: Tres veces la longitud del modo SP.

VP: Cinco veces la longitud del modo SP.

- Para conseguir una capacidad de grabación más larga, seleccione "EP" o "VP".

- Si la calidad de la imagen es importante para Ud. o bien si quiere almacenar la cinta durante un largo período, seleccione "SP".

- Esta unidad puede reproducir cintas grabadas con el modo LP en otro equipo (se enciende "LP" en el visualizador).

Modo VP:

- "VP" destella en el visualizador de la unidad durante 8 segundos después de iniciar la grabación.

- Una cinta grabada en el modo VP por esta unidad no puede ser reproducida por otro modo VCR. Se recomienda que se la distinga de otra cinta indicando "VP" en su etiqueta, etc.

- Lleva más tiempo para que funcione la pista automática cuando se reproducen cintas en el modo VP y, en algunas cintas, podría no funcionar de ninguna manera. Si fuese el caso, haga la localización manualmente.

Nota

- Aunque el cassette que usa tenga la etiqueta "S-VHS", no es posible grabar en el sistema S-VHS con esta unidad. Esta se graba en el normal sistema VHS.

- No puede reproducir grabaciones VP en otro equipo.

- No puede cambiar canales mientras graba. Puede cambiar canales mientras está en el modo de pausa.

- Cuando la grabación está en pausa durante más de 5 minutos, la unidad vuelve al modo de parada.

■ Para visualizar el tiempo aproximado que queda en la cinta

1 Seleccione "SELECCIONAR CINTA" desde el menú VHS MENU y elija la longitud correspondiente de la cinta.

2 Pulse varias veces [STATUS].

El visualizador cambia tan pronto como se pulsa cada vez [STATUS].

Reloj→ Contador→ **Tiempo que queda en la cinta**

↑

- El tiempo que queda en la cinta podría no visualizarse correctamente según la cinta usada.

■ Indicación del tiempo en que se parará la grabación Durante la grabación

Pulse [●, REC] para seleccionar el tiempo de grabación.

- En la unidad principal, pulse [●, REC] por el lado del VHS.

Visualización de la unidad

Cada vez que pulsa la tecla:

Contador (suprimir) → OFF 0:30 → OFF 1:00 → OFF 1:30

↑ OFF 4:00 ← OFF 3:00 ← OFF 2:00 ←

Referencia

- Esto no funciona durante las grabaciones temporizadas.
- Pulsando [■, STOP] la grabación se detiene y el horario configurado se borra.

■ Recepción de las transmisiones televisivas durante la grabación (→ 80)

Grabación temporizada

Puede introducir hasta 16 programas con un adelanto de un mes.

Operaciones preliminares

- Seleccione el canal que ve la imagen de la unidad (por ejemplo la entrada AV) en el televisor.
- Controle que el reloj esté ajustado a la hora correcta. Por si no lo estuviese, ajústelo.
- Inserte un cassette de vídeo que tenga la lengüeta de protección contra el borrado accidental intacta. (→ 82)
- Pulse [VHS].

■ Uso del sistema VCR Plus+

Se refiere a "Uso del sistema VCR Plus+", paso 1–5. (→ 81)

■ Programación manual

- Cuando se conecte una caja TV de cable o un receptor de satélite, seleccione el canal en la caja TV de cable o receptor de satélite antes de que comience la grabación temporizada.

1 Pulse [SCHEDULE].

- Cerciérese de que esté seleccionado "NUEVA GRABACIÓN PROGRAMADA".

2 Pulse [ENTER] para mover y cambiar los detalles usando [▲, ▼, ◀, ▶].

- Pueden usarse las teclas numéricas para introducir "CA".
- **CA** (Posición del programa/Nombre de la estación de TV)
- **FECHA**

Puede crear Ud. un programa diario o semanal.

- **ACT** (hora de encendido)/**DES** (hora final)

Si mantiene pulsado el botón, el tiempo aumentará o disminuirá en incrementos de 30 minutos.

- **Modo de grabación**

Para cambiar el modo de grabación, puede pulsar también [REC MODE].

SP↔EP↔VP↔A*↔SP... (→ izquierda)

* Modo SP/EP automático (→ abajo)

3 Al terminar las correcciones pulse [ENTER].

- "⌚" se enciende en el visualizador de la unidad.

- Para continuar programando:

Seleccione "NUEVA GRABACIÓN PROGRAMADA" y repita los pasos 2–3.

4 Pulse [RETURN].

Nota

- "⌚" y "📺" destellan cuando la unidad no puede ejecutar la grabación temporizada (por ejemplo, el cassette de vídeo no tiene la lengüeta de protección contra el borrado accidental o bien no hay ningún cassette de vídeo en su respectivo compartimiento).
- El tiempo real grabado podría alargarse más allá del programa mismo cuando los programas TV se graban usando el sistema VCR Plus+.
- Si ajusta "HL" (Tiempo de ahorro de la luz del día) a "Act" cuando ajusta manualmente el reloj, la grabación temporizada podría no funcionar cuando del verano cambia al invierno y viceversa.

■ Para detener la grabación mientras un programa está trabajando Pulse [■, STOP], luego [ENTER] dentro de 5 segundos.

- Puede también mantener pulsado [■] en el VHS de la unidad principal durante 3 o más segundos para detener la grabación.

■ Modo SP/EP automático

Si al comienzo de la grabación temporizada, no queda cinta bastante para terminarla, la función SP/EP hará marchar automáticamente la cinta a la velocidad EP para la grabación. Esto garantiza que será grabado el entero programa. Si el modo EP no es bastante para alargar la cinta para que se adapte al entero programa, no será posible grabar el entero programa TV.

Primer programa (30 min.)	Segundo programa (60 min.)		Programación temporizada
30 min. en SP	15 min. en SP	45 min. en EP	Cinta de vídeo (por ej.: cinta de 60 minutos)

- No es posible activar automáticamente el modo VP.
- La longitud de la cinta ha de ser ajustada correctamente.
- Algunas cintas podrían no funcionar correctamente.
- Si cambia el modo de grabación de SP a EP durante la grabación temporizada, en aquel punto podría tener lugar una breve distorsión de la imagen.

■ Controle, cambie o borre el programa

Se refiere a "Controle, cambie o borre el programa", paso 1–5. (→ 81)

■ Precauciones al usar la grabación temporizada en DVD y VHS (→ 81)

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