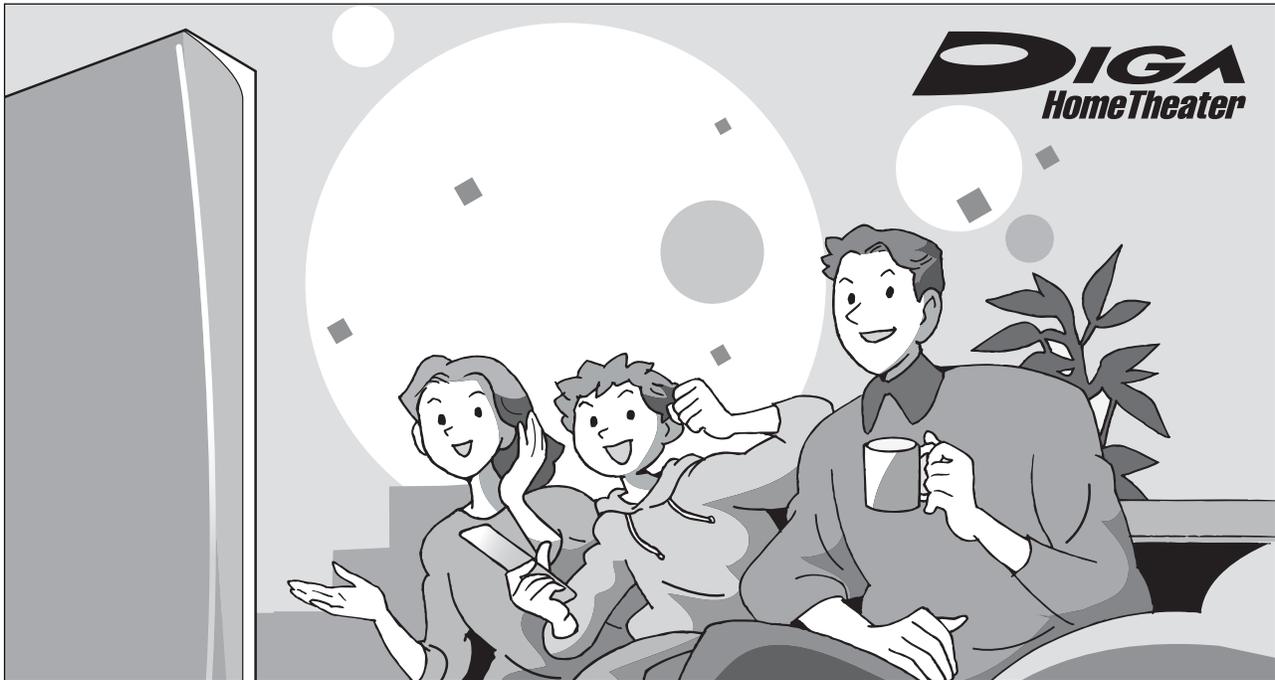# Panasonic®

Operating Instructions

Recordable DVD Home Theater System

Model No. **SC-RT50**

Operations Guide

Before using this product, perform setup and connections after carefully reading the Setup Guide.

Getting started

Recording

Playing back

Editing & Copying

Convenient functions

Radio & Sound

Settings

Info

DIGA
HomeTheater

DVD VIDEO RAM | DVD RW/R | DVD AUDIO | COMPACT disc DIGITAL VIDEO | SD | RAM COMPATIBLE RECORDER | HDMI HIGH-DEFINITION MULTIMEDIA INTERFACE

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
1-800-211-PANA(7262)

The warranty can be found on page 51.

Region number supported by this unit
Region numbers are allocated to DVD players and software 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:

1 | ALL | 1 2 4

P

RQT8655-1P

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.

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.

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.

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.

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.

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
Telephone No.: 1-800-211-7262

The socket outlet shall be installed near the equipment and easily accessible.
The mains plug of the power supply cord shall remain readily operable.
To completely disconnect this apparatus from the AC Mains, disconnect the power supply cord plug from AC receptacle.

Notice:

This product has parts that contain a small amount of mercury. Disposal of these materials may be regulated in your community due to environmental considerations.
For disposal or recycling information please contact your local authorities, or the Electronics Industries Alliance: <http://www.eiae.org.>

DANGER	VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM. FDA 21 CFR/Class Ⅲb
注意	打开时有可见及不可见激光辐射。避免光束照射。
注意	ここを開くと可視及び不可視レーザ光が出ます。ビームを見たり、触れたりしないでください。
CAUTION	CLASS 3B VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO THE BEAM. IEC60825-1 +A2/Class 3B
ATTENTION	RAYONNEMENT LASER VISIBLE ET INVISIBLE, CLASSE 3B, EN CAS D'OUVERTURE. ÉVITER UNE EXPOSITION AU FAISCEAU.
FORSIGTIG	SYNLIG OG USYNLIG LASERSTRÅLING KLASSE 3B, NÅR LÅGET ER ÅBENT. UNDGÅ AT BLIVE UDSAT FOR STRÅLEN.
VARO	AVATTAESSA OLET ALTTIINA LUOKAN 3B NÄKYVÄÄ JA NÄKYMÄTÖNTÄ LASERSÄTEILYÄ. VARO ALTISTUMISTA SÄTEELLE.
VARNING	KLASS 3B SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. UNDVIK EXPONERING FÖR STRÅLEN.
VORSICHT	SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG KLASSE 3B, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.
CAUTION	VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO THE BEAM. (IEC60825-1)
ATTENTION	RAYONNEMENT LASER VISIBLE ET INVISIBLE EN CAS D'OUVERTURE. EXPOSITION DANGEREUSE AU FAISCEAU.
ADVARSEL	SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARO!	AVATTAESSA OLET ALTTIINA NÄKYVÄÄ JA NÄKYMÄTÖN LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING	SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. BETRAKTA EJ STRÅLEN.
VORSICHT	SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.
ADVARSEL	SYNLIG OG USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES. UNNGÅ EKSPONERING FOR STRÅLEN. VQL1J67

(Inside of product)

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.

Table of contents

Listening caution

Selecting fine audio equipment such as the unit you've just purchased is only the start of your musical enjoyment. Now it's time to consider how you can maximize the fun and excitement your equipment offers. This manufacturer and the Electronic Industries Association's Consumer Electronics Group want you to get the most out of your equipment by playing it at a safe level. One that lets the sound come through loud and clear without annoying blaring or distortion—and, most importantly, without affecting your sensitive hearing.

We recommend that you avoid prolonged exposure to excessive noise.

Sound can be deceiving. Over time your hearing "comfort level" adapts to higher volumes of sound. So what sounds "normal" can actually be loud and harmful to your hearing.
Guard against this by setting your equipment at a safe level BEFORE your hearing adapts.
To establish a safe level:
● Start your volume control at a low setting.
● Slowly increase the sound until you can hear it comfortably and clearly, and without distortion.
Once you have established a comfortable sound level:
● Set the dial and leave it there.
Taking a minute to do this now will help to prevent hearing damage or loss in the future. After all, we want you listening for a lifetime.

RQT8655

Accessories/The remote control information

Accessories

Please check and identify the supplied accessories. Use numbers indicated in parentheses when asking for replacement parts. (Product numbers correct as of March 2006. These may be subject to change.)

To order accessories, refer to "Accessory Purchases" on page 51.

☐ **1 Remote control**
(EUR7662Y10)

☐ **2 Batteries**
for remote control

☐ **1 AC power supply cord**
(K2CB2CB00018)
≥For use with this unit only. Do not use it with other equipment. Also do not use cords for other equipment with this unit.

☐ **1 Video cable**
(K2KA2BA00001)

☐ **1 75 Ω coaxial cable**
(K2KZ2BA00001)

☐ **1 AM loop antenna**
(N1DAAAA00002)

☐ **1 FM indoor antenna**
(RSA0007-L)

☐ **4 Speaker cables**
2× short cables (REEX0449B-1L)
2× long cables (REEX0449E-1L)

☐ **2 Sheets of speaker cable stickers**

☐ **6 Screws**
(RHDX50004)

☐ **2 Sliders**
(RMAX0093-S)

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

System	SC-RT50
Main unit	SA-RT50
Front speakers	SB-FS940
Center speaker	SB-PC940
Surround speakers	SB-FS941
Subwoofer	SB-W940

The remote control information

∎ Batteries
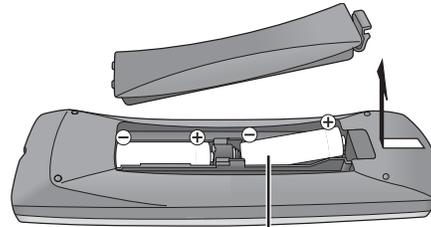
R6/LR6, AA

≥Insert so the poles (+ and –) match those in the remote control.
≥Do not use rechargeable type batteries.
≥Do not mix old and new batteries.
≥Do not use different types at the same time.
≥Do not heat or expose to flame.
≥Do not take apart or short circuit.
≥Do not attempt to recharge alkaline or manganese batteries.
≥Do not 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 the batteries if the remote control is not going to be used for a long period of time. Store in a cool, dark place.

∎ Use

Remote control signal sensor

20°
30°
20°
30°

7 m (23 feet) directly in front of the unit
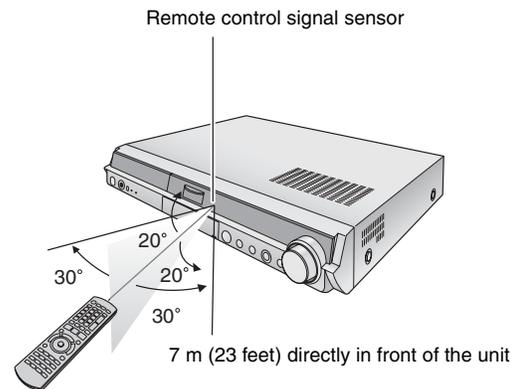
The manufacturer accepts no responsibility and offers no compensation for loss of recorded or edited material due to a problem with the unit or recordable media, and accepts no responsibility and offers no compensation for any subsequent damage caused by such loss.
Examples of causes of such losses are
≥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.

Control reference guide

Remote control

Remote control signal output

Turn on the television

Switches the remote control operation between the unit and the TV.
Press [THEATER] when operating the main unit, or press [TV] when operating the television.

Turn the unit on

Select the source
DVD/SD, FM/AM,
AUX/FRONT MUSIC P./REAR MUSIC P.

Input select (IN1, IN2 or DV)

Select channels and title numbers, etc./
Enter numbers

Channel select (➡ page 12)

Adjust the volume

Cancel

Delete items (➡ page 31)

Basic operations for recording and play

Skip the specified time(➡ page 17)

Skip a minute forward (➡ page 17)

Show scheduled recording list (➡ page 14)

Selection (▲, ▼, ◄, ►) /Enter,
Frame-by-frame (◄II, II►)
(➡ page 17)

Show Direct Navigator/Top menu
(➡ page 16, 18, 20, 22, 26)

Show FUNCTIONS window

Show sub menu (➡ page 22, 26)

Show on-screen menu (➡ page 21)
[B] for Direct Navigator (➡ page 18)

Return to previous screen

Select audio (➡ page 13, 17)
[A] for Direct Navigator (➡ page 16)

Create chapters (➡ page 17)

Change recording mode (➡ page 12)

Show Setup menu (➡ page 37)

Start recording/Specify the time to stop recording (➡ page 12, 13)

Show status messages (➡ page 16)

Start Flexible Recording (➡ page 13)

Change the sound quality (➡ page 35)

Add/delete channel (Setup Guide ➡ page 13)

Enhance surround sound(➡ page 35)

Enhance the bass sound (➡ page 35)

Enhance the sound from the center speaker(➡ page 35)/
Change radio reception mode(➡ page 34)

Muting (➡ page 36)

Equalize the sound(➡ page 35)/
Select speaker channels(➡ page 36)

Adjust the subwoofer level (➡ page 36)/
Down-mix signals to 2 channels (➡ page 36)

Main unit

POWER button[POWER ⏻/I]
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.

Connector for a digital video (DV) camcorder (➡ page 30)

Connector for headphones (➡ page 41)

SD card slot (➡ page 8)

Open/close disc tray (➡ page 12)

Connector for external equipment (➡ page 30)

Display (➡ below)

Channel select (➡ page 12)

Turn up/down the volume

Disc tray
(➡ page 12)

Select the source
DVD→SD→FM→AM→
AUX→
FRONT MUSIC P. →
REAR MUSIC P.→
Return to DVD

Connector for an external device
(➡ page 41)

Equalizing the sound (➡ page 35)

Start recording (➡ page 12)/Specify the time to stop recording (➡ page 13)

SURROUND MUSIC indicator
(➡ page 35)

Start play (➡ page 16)

SURROUND ENHANCER indicator
(➡ page 35)

Opening the front panel
Press down the ∘∘∘ part with your finger.

Stop (➡ page 12, 17)

The unit's display

D.MIX indicator
(➡ page 36)

Disc indicator
This indicator lights up when a disc that is supported by this unit is inserted.

SD Card indicator
This indicator lights up when a card is inserted.

Radio broadcast display
(➡ page 34) :
Channel preset memory indicator

Scheduled recording indicator (➡ page 14)

DTS indicator (➡ page 36)

This lights up when optional Panasonic wireless accessories are plugged in (➡ page 41).

Main display section

H.BASS indicator (➡ page 35)

Center Focus indicator
(➡ page 35)

MIX2CH indicator (➡ page 36)

Dolby Digital indicator (➡ page 36)

Sound field control indicator (➡ page 35)

Rec/Play indicator (➡ page 12,16)

Equalizer indicator (➡ page 35)

Radio broadcast display (➡ page 34)
TUNED : Receiving radio signal/ST : Stereo/MONO : Monaural

RQT8655

Disc and card information

Discs you can use for recording and play

Disc type	DVD-RAM	DVD-R	DVD-R DL*1 (dual layer on single side)	DVD-RW	+R*2	+R DL*1 (double layer on single side)	+RW
Indication in these instructions	`RAM`	`-R` Before finalization / `DVD-V` After finalization	`-R DL` Before finalization / `DVD-V` After finalization	`-RW(V)` Before finalization / `DVD-V` After finalization	`+R` Before finalization / `DVD-V` After finalization	`+R DL` Before finalization / `DVD-V` After finalization	`+RW`
Logo	DVD RAM RAM4.7	DVD R R4.7	DVD R R DL	DVD R W	____	____	____
Recording format (➡ below)	VR	DVD-Video	DVD-Video	DVD-Video	+VR	+VR	+VR
Data that can be recorded and played	Video Still picture	Video	Video	Video	Video	Video	Video
Re-writable*3	Yes	No	No	Yes	No	No	Yes
What you can do on this unit							
Recording broadcasts that allow one copy	Yes*4	No	No	No	No	No	No
Recording both Main and SAP of MTS broadcast	Yes	No	No	No	No	No	No
Recording 16:9 aspect picture	Yes	No	No	No	No	No	No
Creating playlists	Yes	No	No	No	No	No	No
Compatibility							
Usable high speed recording disc type*5	Up to 5x	Up to 16x	Up to 4x	Up to 6x	Up to 16x	Up to 2.4x	Up to 4x*6
Play on other players	Only on DVD-RAM compatible players. (It is not possible to finalize the disc.)	Yes	Yes*7	Yes	Yes	Yes*8	Yes (It is not possible to finalize the disc.)
		Only on compatible players after finalizing the disc (➡ page 33)					

●We recommend using Panasonic discs. We also recommend using DVD-RAM discs with cartridges to protect them from scratches and dirt.
●You may not be able to record depending on the condition of the discs and you may not be able to play due to the condition of the recording.
●For the recording time, refer to "Recording modes and approximate recording times" on page 11.

*1 You can record onto the second layer of dual- or double-layer discs after closing the first layer (➡ page 33). You will no longer be able to record to the first layer after you do this (➡ page 10). When playing a title recorded on both layers, video and audio may momentarily cut out when the unit is switching layers.
*2 You may not be able to use +R recorded on this unit in another Panasonic DVD recorder and vice versa. Once the disc is finalized, however, it can be played in the other unit.
*3 The amount of the recordable disc space doesn't increase even if the program is deleted when you use a one time recording disc.
*4 CPRM (➡ page 49) compatible discs only.
*5 This unit can use the high-speed recording discs shown in the chart, but using them will not shorten the recording time.
*6 You can play 8x recording speed discs recorded on another equipment.
*7 Play on DVD-R DL compatible equipment.
*8 Play on +R DL compatible equipment.

Regarding recording format

VR (DVD Video Recording) format
This is a recording method which allows you to freely record and edit television 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.

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.
●You can play on compatible equipment such as DVD players after finalizing the disc on this unit.

+VR (+R/+RW Video Recording) format
●This is method for recording moving pictures to +R/+RW discs. You can play back such discs recorded in this method in a similar way as contents recorded in the DVD-Video format.
●Digital broadcast that allow "One time only recording" cannot be recorded.
●After finalizing the disc or creating the top menu, you can play the disc on DVD players and other equipment.

Play-only discs

Disc type	DVD-Video	DVD-Audio	DVD-RW (VR format)	CD		Video CD
Indication in these instructions	DVD-V	DVD-A	-RW(VR)	CD		VCD
Logo					―	
Instructions	High quality movie and music discs	High fidelity music discs	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 (➡ page 32) the disc, you can record to it in DVD-Video format. ● It may be necessary to finalize the disc on the equipment used for recording.	Music and audio recorded (including CD-R/RW*)	CD-R and CD-RW* with music recorded in MP3 Still pictures (JPEG and TIFF) recorded on CD-R and CD-RW*	Music and video recorded (including CD-R/RW*)

● 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.
● Operation and sound quality of CDs that do not conform to CD-DA specifications (copy control CDs, etc.) cannot be guaranteed.
* Close the session after recording. Play may be impossible on some discs due to the condition of the recording.

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.

Discs that cannot be played

● 2.6 and 5.2 GB DVD-RAM, 12 cm (5″)
● 3.95 and 4.7 GB DVD-R for Authoring
● DVD-R recorded in VR format
● DVD-R (DVD-Video format), DVD-R DL, DVD-RW (DVD-Video format), +R, +R DL recorded on another unit and not finalized (➡ page 49)

● 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, +R 8 cm (3″), CD-ROM, CDV, CD-G, Photo CD, CVD, SVCD, SACD, MV-Disc, PD, Divx Video Disc, etc.

Cards you can use on this unit

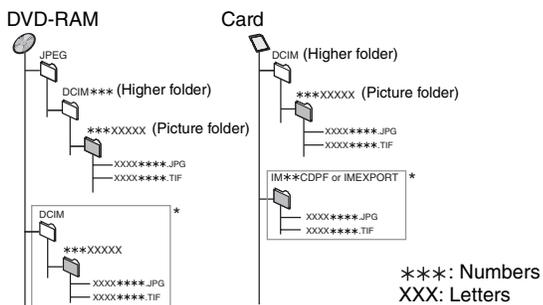| Type	SD Memory Card, miniSD™ Card* MultiMediaCard
Indication in these instructions	SD
Data that can be recorded and played	**Still pictures**
Instructions	You can insert directly into the SD card slot. * A miniSD™ card adaptor included with the miniSD™ card is necessary. ● You can play and copy still pictures taken on a digital camera, etc. (➡ page 18,28). ● You can set the DPOF (Digital Print Order Format) for automatic printing on your home printer or at a photo developing store (➡ page 27, 49).

Suitable SD Memory Cards

You can use SD Memory Cards with the following capacities (from 8 MB to 2 GB).

8 MB,	16 MB,	32 MB,	64 MB,	128 MB,
256 MB,	512 MB,	1 GB,	2 GB (Maximum)	

● Useable memory is slightly less than the card capacity.
● Please confirm the latest information on the following website.
　http://panasonic.co.jp/pavc/global/cs
　(This site is in English only.)
● If the SD Memory Card is formatted on other equipment, the time spent for recording may become longer. Also if the SD Memory Card is formatted on a PC, you may not be able to use it on this unit.
　In these cases, format the card on this unit (➡ page 32, 49).
● This unit supports SD Memory Cards formatted in FAT 12 system and FAT 16 system based on SD Memory Card Specifications.
● We recommend using a Panasonic SD card.

Structure of folders displayed by this unit

The following 🗀 can be displayed on this unit.

DVD-RAM

JPEG
　DCIM✱✱✱ (Higher folder)
　　✱✱✱XXXXX (Picture folder)
　　　XXXX✱✱✱✱.JPG
　　　XXXX✱✱✱✱.TIF
DCIM　　　　　*
　✱✱✱XXXXX
　　XXXX✱✱✱✱.JPG
　　XXXX✱✱✱✱.TIF

Card

DCIM (Higher folder)
　✱✱✱XXXXX (Picture folder)
　　XXXX✱✱✱✱.JPG
　　XXXX✱✱✱✱.TIF
IM✱✱CDPF or IMEXPORT　*
　XXXX✱✱✱✱.JPG
　XXXX✱✱✱✱.TIF

✱✱✱: Numbers
XXX: Letters

* Folders can be created on other equipment. However, these folders cannot be selected as a copying destination.
● The folder cannot be displayed if the numbers are all "0" (e.g., DCIM000, etc.).
● If a folder name or file name has been input using other equipment, the name may not be displayed properly or you may not be able to play or edit the data.

Inserting/Removing SD card

When the card indicator ("SD") on the unit's display is flashing, the card is being read from or written to. Do not turn off the unit or remove the card. Such action may result in malfunction or loss of the card's contents.
- **Inserting foreign objects can cause a malfunction.**
- You can use SD Memory Cards with capacities from 8 MB to 2 GB (➡ page 7).

Opening the cover	Inserting the card		Removing the card	Closing the cover
Press the protruding part to open the cover.	Press on the center of the card until it clicks into place.	If you are using a miniSD™ card, insert it into the miniSD™ card adaptor that comes with the card. Insert and remove this adaptor from the unit.	① Press on the center of the card. ② Pull it straight out.	Press down.

Insert the card label up with the cut-off corner on the right.
(Do not forget to close the cover. ➡ right)

Automatic drive select function
If you insert an SD card while the unit is stopped, the "SD Card Operations" screen is displayed. Select an item and press [ENTER] to switch to the SD drive (➡ page 18, 28).
If you remove an SD card, the DVD drive is automatically selected.

Keep the small memory cards such as the SD Memory Card out of reach of children. If swallowed, seek medical advice immediately.

Disc and card handling

■ How to hold a disc or card

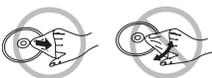Do not touch the recorded surface or the terminal surface.

■ 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 un-balanced 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 expose the terminals of the card to water, garbage or other strange things.
- Do not drop, stack, or impact 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 (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.

Unit care

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

To clean this unit, wipe with a soft, dry cloth.
- Never use alcohol, paint thinner or benzine to clean this 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, making it impossible to record or play discs.
Use the **DVD lens cleaner** (RP-CL720PP) about once every year, depending on frequency of use and the operating environment.
Carefully read the lens cleaner's instructions before use.

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.

Control with HDMI (HDAVI Control)

What is HDAVI Control?
HDAVI Control is a convenient function that offers linked operation of this unit and Panasonic TV (VIERA) under HDAVI Control. You can use this function by connecting the equipment with the HDMI cable. See the operating instructions for connected equipment for operational details.

≥It is recommended that you use Panasonic's HDMI cable. Recommended part number: RP-CDHG15 (1.5 m/4.9 ft.), RP-CDHG30 (3.0 m/9.8 ft.), RP-CDHG50 (5.0 m/16.4 ft.) etc.
≥Non-HDMI-compliant cables cannot be utilized.

1 Perform the following connections.
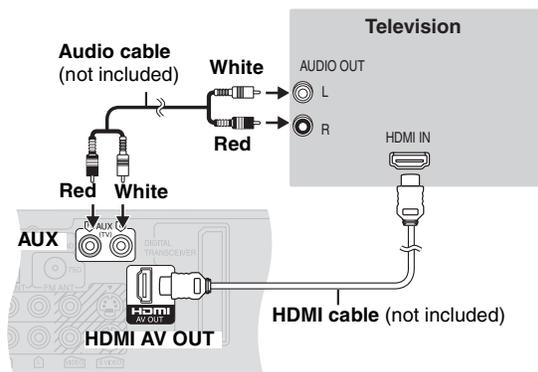
Back of the main unit

2 Set following items in the Setup menu (➡ page 39).

≥"HDMI Video Output" : [On]
≥"HDMI Audio Output" : [On]*
≥"Ctrl with HDMI" : [On]

Turn on all HDAVI Control compatible equipment and select this unit's input channel on the connected television so that the HDAVI Control function works properly. Also when the connection or settings are changed, repeat this procedure.

* **When "HDMI Audio Output" is set to "On"**
≥When audio is output with this unit's speakers, audio quality may be degraded a bit.
≥When playing DVD-Audio with both Multi and 2 channel audio tracks, audio will be output as two-channel output.
≥If connecting to equipment incompatible with CPPM (Content Protection for Prerecorded Media ➡ page 49), copy-protected DVD-Audio cannot be output through the HDMI terminal.
≥Even if set to "On", FM/AM broadcasts and audio from AUX terminals, "F MUSICP", or "R MUSICP" is not output through the HDMI AV OUT terminals.

Automatic input switching

When the following operations are performed the television will automatically switch the input channel and displays the corresponding action. Audio output is also automatically switched to this unit's speakers.

- When play starts on the unit (➡ page 16)
- When an action that uses the display screen is performed [e.g., Direct Navigator screen (➡ page 16), scheduled recording screen (➡ page 14)]

Theater speaker

You can select whether to output audio with this unit's speakers or the television speakers. Set this using the television settings. For more information, please see the television operating instructions.

When audio is output with this unit's speakers:
≥The sound of the television speakers will become mute.
≥You can control this unit's volume using the television remote control's volume or mute button. The volume operation status is displayed on the television.

When audio is output with the television speakers:
≥The sound of this unit becomes "0".
≥Audio output becomes 2-channel only. Multi-channel audio is down-mixed (➡ page 49).

[Note]
≥The display may be blank for several seconds if you switch the speakers while viewing.
≥If you switch to this unit's speakers while the unit is currently off, the power to this unit will automatically turn on. See "Power on link" below.
≥If the unit is turned off, speakers automatically switch to the TV.

Power on link

The television automatically turns on and the corresponding display appears when the following operations are performed with the television in standby mode. Audio output is also automatically switched to this unit's speakers.
- When play starts on the unit (➡ page 16)
- When an action that uses the display screen is performed [e.g., Direct Navigator screen (➡ page 16), scheduled recording screen (➡ page 14)]

Power off link

When the television is turned off, this unit is also automatically turned off.
The unit automatically turns off even if the FUNCTIONS screen, the status message or the on-screen menu is displayed, during playback or when the unit is performing a scheduled recording.
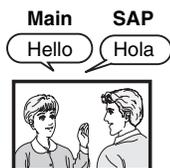
[Note]
≥Even if the television is turned off, the unit will not turn off at the same time in the following conditions:
- When you pressed [● REC] and the unit is recording
- When copying
- When finalizing
- When select "FM", "AM", "F MUSICP." or "R MUSICP." as the source.

For your reference
≥**When [▶ PLAY] is pressed on this unit for "Automatic input switching" or "Power on link", the playback image is not immediately displayed on the screen and it may not be possible to watch the contents from where playback starts.**
In this case, press [|◄◄] or [◄◄] to go back to where playback started.

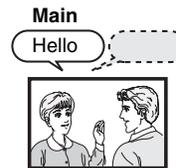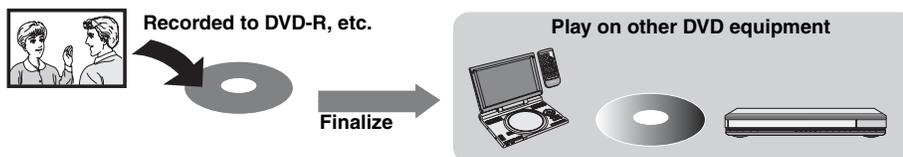|		
Recording of MTS broadcasting	**RAM** **Both main and secondary audio can be recorded** You can change the audio during playback. (➡ page 17, Changing audio) **Main SAP** (Hello) (Hola) If you record from external equipment –Select both "Main" and "SAP" on the external equipment.	**-R -R DL -RW(V) +R +R DL +RW** **Select the main or secondary audio before recording** [➡ page 39, "Multi-channel TV Sound (MTS)"] The selected audio only is recorded. **Main** (Hello) If you record from external equipment – Select "Main" or "SAP" on the external equipment.
Recording of Widescreen broadcasting	**RAM** **Recorded in 16:9 aspect (Widescreen)**	**-R -R DL -RW(V) +R +R DL +RW** **Recorded in 4:3 aspect**
Recording of digital broadcasting	It is not possible to record digital broadcasts that allow "One time only recording" onto DVD-R, DVD-R DL, DVD-RW, +R, +R DL, +RW or 8 cm (3″) DVD-RAM discs. Use a CPRM (➡ page 49) compatible DVD-RAM. **RAM** (CPRM compatible disc only) **-R -R DL -RW(V) +R +R DL +RW** ≥Even when copying to videotape the title may not be copied correctly because of the copy guard. ≥You cannot copy a playlist created from "One time only recording" titles.	
Playing the disc on other DVD players	**-R -R DL -RW(V) +R +R DL** **The disc must be finalized after recording (➡ page 33).** It is necessary to finalize DVD-R, etc. on this unit after recording or copying 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 copy.* * You can record and copy again if you format DVD-RW. **Recorded to DVD-R, etc.** **Play on other DVD equipment** **Finalize** **+RW** To enable play on other DVD equipment, please use "Create DVD Top Menu" in DVD Management menu (➡ page 33).	
Recording to a DVD-R DL and +R DL	**-R DL +R DL** DVD-R DL and +R DL discs have two layers of recording surface on one side. **It is not possible to record continuously from the first layer to the second layer.** Recording stops when space on the first layer becomes full. You must close the first layer to start recording on the second layer. Closing makes the first layer unavailable for recording (editing is still available). You cannot cancel closing. Make certain before proceeding. (Disc inner side) The second layer The available space **It is not possible to record continuously from the first layer to the second layer.** The first layer Title1 → Title2 (Disc outer side) Recording/Playback direction	
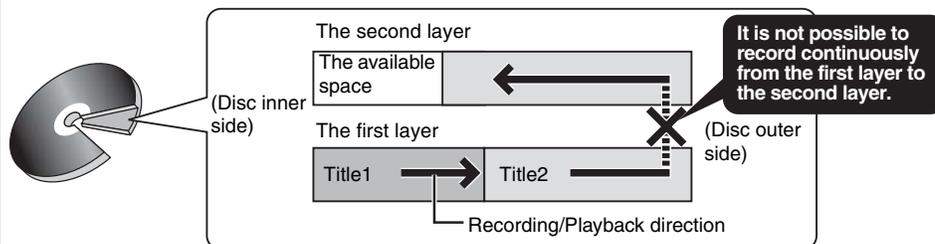
Recording modes and approximate recording times

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

Recording Mode	DVD-RAM		DVD-R, DVD-RW, +R, +RW 4.7GB
	4.7 GB	9.4 GB (Double-sided*1)	
XP (High picture quality)	1 h.	2 h.	1h.
SP (Standard)	2 h.	4 h.	2h.
LP (Long recording)	4 h.	8 h.	4h.
EP (Extra long recording)	8 h. (6 h.*2)	16 h. (12 h.*2)	8 h. (6 h.*2)
FR (Flexible Recording)	8 h. maximum	8 h. maximum for one side	8 h. maximum

Recording Mode	DVD-R DL, +R DL*3 8.5 GB	
	First layer (L0)	Second layer (L1)
XP (High picture quality)	55 min.	50 min.
SP (Standard)	1 h. 50 min.	1 h. 40 min.
LP (Long recording)	3 h. 40 min.	3 h. 20 min.
EP (Extra long recording)	7 h. 25 min. (5 h. 30 min.*2)	6 h. 50 min. (5 h. 15 min.*2)
FR (Flexible Recording)	7 h. 25 min. maximum	6 h. 50 min. maximum

*1 It is not possible to record or play continuously from one side of a double sided disc to the other.

*2 When "Recording Time in EP Mode" is set to "EP–Extended Play (6H)" in the Setup menu. (➡ page 38)
The sound quality is better when using "EP–Extended Play (6H)" than when using "EP–Extended Play (8H)".

*3 It is not possible to record continuously from the first layer to the second layer.

Note
- This unit uses variable bit rate (VBR) recording which varies the amount of data recorded to suit the images, so actual recording times and remaining recording times shown by the unit will be different. (The difference will be especially noticeable with DVD-R DL and +R DL.)
  Use a disc with plenty of remaining time.
- **RAM** When recording to DVD-RAM using EP (8H) mode, play may not be possible on DVD players that are compatible with DVD-RAM. Use EP (6H) mode if playback may be on other equipment.

FR (Flexible Recording)

The unit automatically selects a recording rate between XP and EP (8H) that will enable the recordings to fit in the remaining disc space with the best possible recording quality.
- You can use FR mode in Scheduled recording (➡ page 14, step 3) and Flexible Recording (➡ page 13).

Using "FR mode" is convenient in these kinds of situations.
- When the amount of free space on the disc makes selecting an appropriate recording mode difficult
- When you want to record a long program with the best picture quality possible

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

If you select XP mode

The program will not fit one disc.

60 minutes — 4.7GB DVD-RAM (Full) + 4.7GB DVD-RAM — 30 minutes

Another disc is necessary.

If you select SP mode

The program will fit one disc.

4.7GB DVD-RAM (Remains) — There will be 30 minutes remaining disc space.

If you select FR mode

The program will fit one disc perfectly.

4.7GB DVD-RAM (Fit)


Disc Insertion/Ejection

When the format confirmation screen is displayed

RAM **-RW(V)** **+R** **+R DL** **+RW**
When you insert a new disc and a disc recorded on a computer or other equipment, a format confirmation screen might be displayed. Format the disc to use it. However all the recorded contents are deleted.
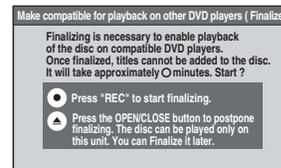
Format

This disc is not formatted properly.
Do you want to format the disc in DVD Management?

| Yes | No |
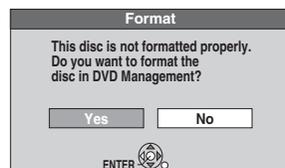
ENTER

Press [◄, ►] to select "Yes" and press [ENTER].
Several steps are necessary to format a disc. Refer to "Deleting all contents of a disc or card –Format" (➡ page 32).

When removing a recorded disc

-R **-R DL** **-RW(V)** **+R** **+R DL**
When you press [▲ OPEN/CLOSE] on the main unit while stopped: The following screen appears when you have not processed the disc for play on other equipment.

Make compatible for playback on other DVD players (Finalize)

Finalizing is necessary to enable playback
of the disc on compatible DVD players.
Once finalized, titles cannot be added to the disc.
It will take approximately ○minutes. Start ?

○ Press "REC" to start finalizing.

▲ Press the OPEN/CLOSE button to postpone
finalizing. The disc can be played only on
this unit. You can Finalize it later.
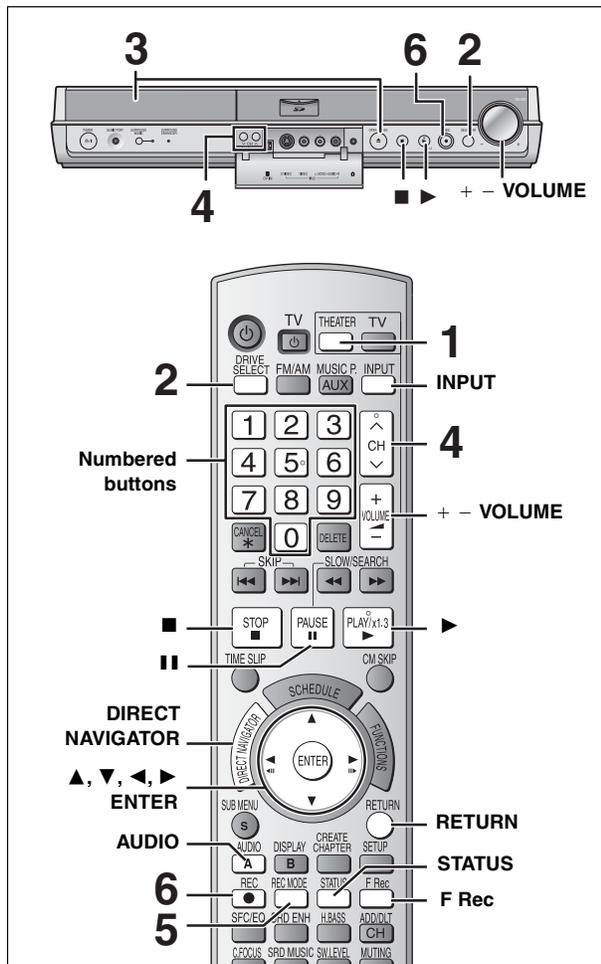
■ When finalizing the disc
Press [● REC].
- You cannot stop this process once you have started it.
- If you want to provide the disc with a name or set play menu select, select "Disc Name" (➡ page 32) or "Playback will start with:" (➡ page 33) in "DVD Management" before finalizing.

■ When opening the tray without disc finalization
Press [▲ OPEN/CLOSE] on the main unit.

RAM -R -R DL -RW(V)
≥You can record up to 99 titles on one disc.

+R +R DL +RW
≥You can record up to 49 titles on one disc.

SD
≥It is not possible to record onto a card.

See also the notes "Important notes for recording"(➡ page 10)

Note
≥ RAM 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.
≥ +RW You can create a Top Menu using "Create DVD Top Menu" (➡ page 33). Recording or editing on the disc may delete the menu. In that case, create the menu again.

Preparation
≥Turn on the television and select the appropriate video input to suit the connections to this unit.
≥Turn the unit on.

Off Timer
The unit switches to standby after about 6 hours in the stop mode. You can turn this feature off or change the time to 2 hours (➡ page 37, "Off Timer").

---

1 Press [THEATER] to switch the remote control to operate this unit.

2 Press [DRIVE SELECT] to select the DVD drive.
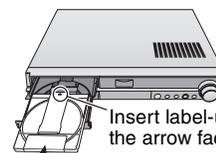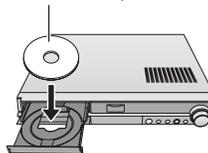
The main unit: Press [SELECTOR] to select the DVD drive.

3 Press [▲ OPEN/CLOSE] on the main unit to open the tray and insert a disc.

≥Press the button again to close the tray.
≥When using 8 cm (3″) DVD-RAM, or 8 cm (3″) DVD-R, remove the disc from the cartridge.

Insert label-up.   ■ **Cartridge disc**

Insert label-up with the arrow facing in.

Insert fully so it clicks into place.

4 Press [∧ ∨ CH] to select the channel.

To select with the numbered buttons:

Antenna		**Cable TV**	
e.g., 5:	[0] ➔ [5]	e.g., 5:	[0] ➔ [0] ➔ [5]
15:	[1] ➔ [5]	15:	[0] ➔ [1] ➔ [5]
		115:	[1] ➔ [1] ➔ [5]

≥Select the audio to record (➡ page 13).

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

Remaining time on the disc

6 Press [● REC] to start recording.

The elapsed time is shown on the display.
Recording will take place on free space on disc. Data will not be overwritten.
≥You can adjust the volume using [+ − VOLUME]. Adjusting the volume will not affect the recorded audio.
≥You cannot change the channel or recording mode during recording. You can change the channel or recording mode while paused; however, the recording will then be as a separate title.
≥You can record while the unit is in standby for scheduled recording, but once the time for the scheduled recording to begin is reached, any recording taking place will stop and the scheduled recording will begin.

■ **To pause recording**
Press [❙❙].
Press again to restart recording.
You can also press [● REC] to restart.
(Title is not split into separate titles.)

■ **To stop recording**
Press [■].
≥From the start to the end of the recording is called one title.
≥ -R -R DL -RW(V) +R +R DL +RW
It takes about 30 seconds for the unit to complete recording management information after recording finishes.

■ **When recording the channel (not set on this unit) from cable box or satellite receiver**
① Select the channel on the equipment before turning the unit on.
② Press [∧ ∨ CH] to select IN1 or IN2 in step 4 (➡ above).

To specify a time to stop recording –One Touch Recording

`RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW`
During recording
Press [● REC] to select the recording time.

≥The unit's display changes as shown below.

OFF 0: 30 ⟶ OFF 1: 00 ⟶ OFF 1: 30 ⟶ OFF 2: 00
⤴ Counter (cancel) ⟵ OFF 4: 00 ⟵ OFF 3: 00 ⟵⤶

≥This does not work during scheduled recordings (➡ page 14) or while using Flexible Recording (➡ below).
≥If you change the channel or recording mode while recording is paused, the time specified to stop recording is cancelled.
≥The unit turns off automatically after the time to stop recording is reached.

To cancel
Press [● REC] several times until the counter appears.
≥The time to stop recording is cancelled; however, recording continues.

To stop recording partway
Press [■].

Flexible Recording
(Recording that fits the remaining disc space)

`RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW`
The unit sets the best possible picture quality that fits the recording within the remaining disc space. The recording mode becomes FR mode. Refer to "FR (Flexible Recording)" (➡ page 11).

Preparation
≥Press [THEATER] to switch the remote control to operate this unit.
≥Press [DRIVE SELECT] to select the DVD drive.
≥Press [∧ ∨ CH] to select the channel or press [INPUT] to select the external input (IN1, IN2 or DV) to record.

1 While stopped
Press [F Rec].

Flexible Recording
Record in FR mode.
Max recording time   8 Hour 00 Min. — **Maximum recording time** This is the maximum recording time in FR mode.
Set recording time   8 Hour 00 Min.
Start   Cancel

2 Press [◄, ►] to select "Hour" and "Min." and press [▲, ▼] to set the recording time.
≥You can also set the recording time with the numbered buttons.
≥You cannot record for more than 8 hours.

3 When you want to start recording
Press [▲, ▼, ◄, ►] to select "Start" and press [ENTER].
Recording starts.

To exit the screen without recording
Press [RETURN].

To stop recording partway
Press [■].

To show the remaining time
Press [STATUS].

e.g., DVD-RAM
DVD-RAM
Rec. 0:59 — Remaining time of recording
CH71
Stereo

Playing while you are recording
`RAM`

Playing from the beginning of the title you are recording—Chasing playback

Press [►] (PLAY) during recording.
≥There is no sound output while searching forward or backward.

To stop play
Press [■].

To stop recording
2 seconds after play stops
Press [■].

To stop scheduled recording
① Press [■] to stop playing.
② After 2 seconds, press [■].
③ Press [◄, ►] to select "Stop recording" and press [ENTER].

Playing a title previously recorded while recording— Simultaneous rec and play

1 Press [DIRECT NAVIGATOR] during recording.
2 Press [▲,▼,◄, ►] to select a title and press [ENTER].

To stop play
Press [■].

To exit Direct Navigator screen
Press [DIRECT NAVIGATOR].

To stop recording
① Press [■] to stop playing.
② Press [DIRECT NAVIGATOR] to exit screen.
③ Press [■].

To stop scheduled recording
① Press [■] to stop playing.
② Press [DIRECT NAVIGATOR] to exit screen.
③ Press [■].
④ Press [◄, ►] to select "Stop recording" and press [ENTER].

Selecting audio to record
`RAM`
Press [AUDIO].

→ **Stereo:** Main audio (stereo)
↓ ≥If the broadcast is "Mono+SAP", audio will be monaural even if you select Stereo mode.
SAP Audio: Secondary audio program (SAP)
↓ ≥If recorded in SAP mode, main audio is also recorded.
— **Mono:** Main audio (monaural)
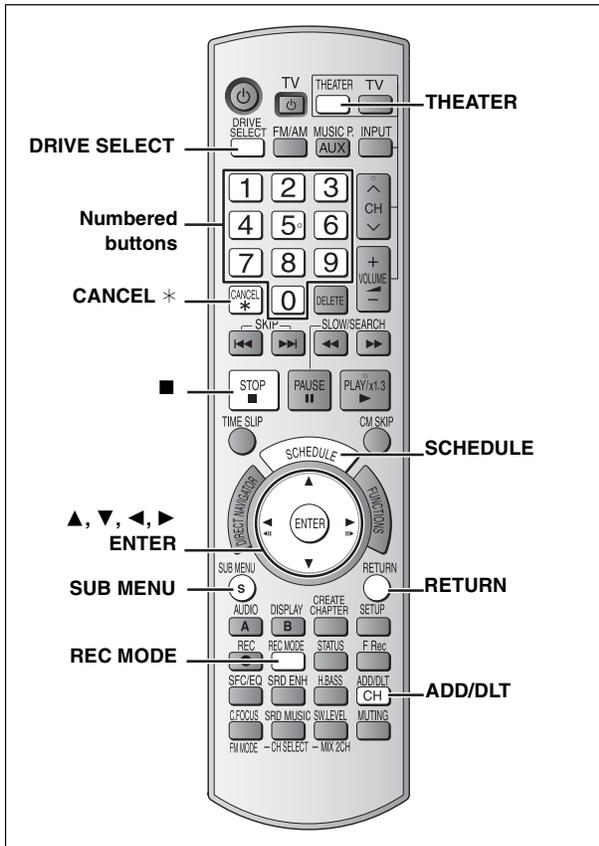≥Select "Mono" if reception is poor during a stereo broadcast.
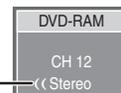
DVD-RAM
CH 12
◄◄ Stereo
e.g., "Stereo" is selected

"◄◄" 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` `-R DL` `-RW(V)` `+R` `+R DL` `+RW`
Select the audio (Main or SAP) in "Multi-channel TV Sound (MTS)" in the Setup menu (➡ page 39).

RQT8655

Scheduled recording

THEATER

DRIVE SELECT

Numbered buttons

CANCEL ✳

■ STOP

SCHEDULE

▲, ▼, ◄, ►

ENTER

SUB MENU

RETURN

REC MODE

ADD/DLT

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

See also the notes "Important notes for recording" (➡ page 10).

You can enter up to 16 programs up to a month in advance. (Each daily or weekly program is counted as one program.)

Preparation
● Turn on the television and select the appropriate video input to suit the connections to this unit.
● Press [THEATER] to switch the remote control to operate this unit.
● Press [DRIVE SELECT] to select the DVD drive.
● Check that the time on the unit is correct.
● Insert a disc. (➡ page 12)

1 Press [SCHEDULE].
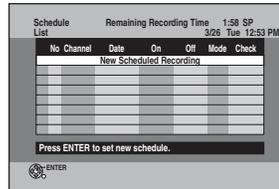
2 Press [▲, ▼] to select "New Scheduled Recording" and press [ENTER].

3 Press [►] to move through the items and change the items with [▲, ▼].

● Press and hold [▲, ▼] to alter On (Start time) and Off (Finish time) in 30-minute increments.
● You can also set Channel, Date, On (Start time), and Off (Finish time) with the numbered buttons.
● You can also press [REC MODE] to change the recording mode.
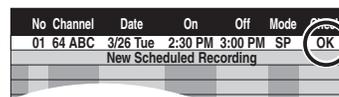
■ To set daily or weekly timer
Press [◄, ►] to select "Date" and [▲, ▼] to select daily timer or weekly timer.

> → Date: Current date up to one month later
>   ↑↓   minus one day
>
>   Daily timer: Sun-Sat → Mon-Sat → Mon-Fri
>   ↑↓
> → Weekly timer: Weekly, Sun → --- → Weekly, Sat

■ To enter Title Name
Press [◄, ►] to select "Title Name" and press [ENTER] (➡ page 31, Entering text).

4 Press [ENTER].

When "!" appears, make sure the disc has a sufficient space.

"⏱" lights on the unit's display to indicate scheduled recording standby has been activated.
● Repeat steps 2–4 to schedule other recordings.

Note
When the disc is removed, scheduled recording standby is cancelled (the "⏱" indicator goes out). You can put the unit back on standby by inserting a recordable disc (the "⏱" lights on again).

■ To return to the previous screen
Press [RETURN].

■ To exit the screen
Press [SCHEDULE].

### ■ When recording the channel (not set on this unit) from cable box or satellite receiver
① Press [▲, ▼] to select IN1 or IN2 in the channel column (➡ above, step 3).
② Select the channel on the equipment before the scheduled time.

Cancel scheduled recording that has already begun

1 **When the unit is on**

Press [■].

The confirmation screen appears.

2 **Press [◀, ▶] to select "Stop recording" and press [ENTER].**

Recording stops and the scheduled recording is cancelled. (Daily and weekly schedules remain and scheduled recording will start as programmed.)

Release program from recording standby

1 **Press [SCHEDULE].**

2 **Press [▲, ▼] to select the program and press [SUB MENU].**

3 **Press [▲, ▼] to select "Schedule set to Off" and press [ENTER].**

Cancelled icon is displayed in left column.

> **Schedule List**
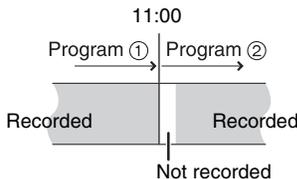>
> **No Channel**
> 01 64 ABC
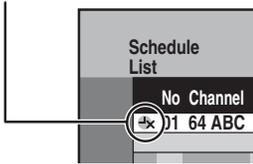
≥Be sure to select "Schedule set to On" in step 3 before the scheduled time to put the program on recording standby.

Notes on scheduled recording

- ≥"⏱" flashes on the unit's display for about 5 seconds when the unit cannot go to scheduled recording standby (e.g., a recordable disc is not in the disc tray).
- ≥Scheduled recordings begin when the set time is reached even when recording or when playing.
- ≥Scheduled recordings do not begin while copying still pictures (➡ page 28).
- ≥If the unit is turned on when scheduled recording begins, it remains turned on after recording finishes. It does not turn off automatically. You can turn the unit off during scheduled recording.
- ≥If you are making consecutive recordings that will start one after the other, the beginning of the later program cannot be recorded.

e.g., Program① 10:00–11:00
Program② 11:00–12:00

```
                    11:00
        Program ①  |  Program ②
         ─────────→│  ────────→

        Recorded   |    Recorded
                    │
              Not recorded
```

- ≥If the actual broadcasting times of scheduled recordings overlap, the recording that starts first always has priority, and the recording of the later program will start only after the first timer recording has finished.
- ≥If you set DST (Daylight Saving Time) to On when manually setting the clock (➡ Setup Guide, page 15), scheduled recording may not work when summer switches to winter and vice versa.
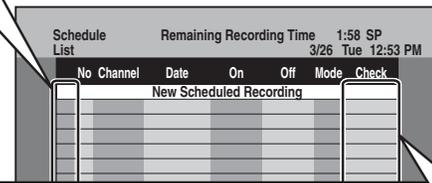
Check, change or delete a program

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

Press [SCHEDULE].

Icons

- ● This program is currently recording.
- ⓦ The times overlap those in another program.
- ⍉x Scheduled recording standby is cancelled. Recording will not start at the scheduled time.
- ⊖ You stopped a weekly or daily scheduled recording. The icon disappears the next time the scheduled program starts recording.
- Ⓕ The disc was full so the program failed to record.
- ◪ The material was copy-protected so it was not recorded.
- ⓧ The program did not complete recording because the disc is dirty or for some other reason.

Schedule List		Remaining Recording Time		1:58 SP	
				3/26 Tue 12:53 PM	
No	Channel	Date	On	Off	Mode	Check
		New Scheduled Recording			

Message displayed in the Check line

OK:	Displayed if the recording can fit in the remaining space.
→ (Date):	For recordings made daily or weekly, the display will show until when recordings can be made (up to a maximum of one month from the present time) based on the time remaining on the disc.
!:	It may not be possible to record because: ≥no disc is inserted. ≥the disc is write-protected. ≥there is no more space left. ≥the number of possible titles has reached its maximum. ≥scheduled recording standby is cancelled.
Overlap:	The times overlap those in another program. Recording of the program with the later start time starts when the earlier program finishes recording.

■ To change a program

Press [▲, ▼] to select the program and press [ENTER].
(➡ page 14, step 3).

≥During scheduled recording, you can change the end time as long as the recording mode is not "FR".

■ To delete a program

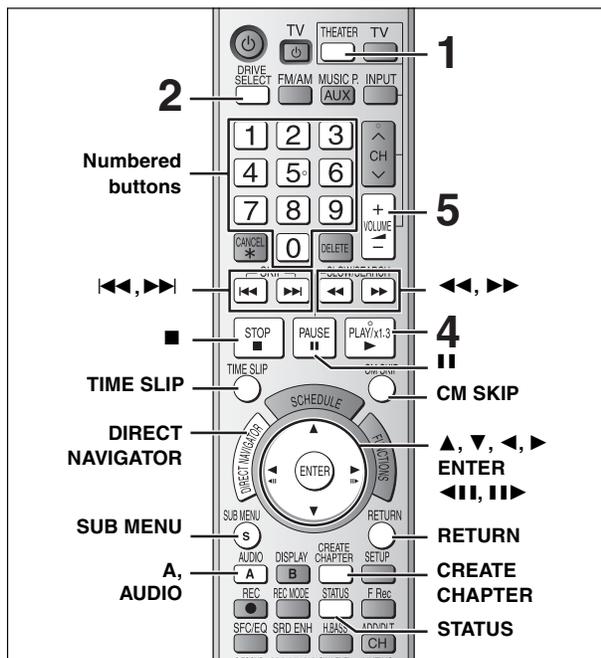**Press [▲, ▼] to select the program and press [CANCEL ✳] or [ADD/DLT].**

■ To cancel recording that has already begun

Press [▲, ▼] to select program and press [SUB MENU], then press [ENTER].

■ To exit the schedule list

Press [SCHEDULE].

≥Programs that failed to record are displayed gray, and cannot be changed. They are automatically deleted from the schedule list at 4 a.m. two days later.

Playing discs

Numbered buttons

|◄◄, ►►|

■

TIME SLIP

DIRECT NAVIGATOR

SUB MENU

A, AUDIO

◄◄, ►►

4

II

CM SKIP

▲, ▼, ◄, ►
ENTER
◄II, II►

RETURN

CREATE CHAPTER

STATUS

■ If the recorded title is stretched vertically

If recorded to a DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R, +R DL or +RW disc, 16:9 aspect images will record as 4:3 images.
≥You may be able to adjust it by changing the display mode on your television, please refer to the television's operating instructions.

Preparation
≥Turn on the television and select the appropriate video input to suit the connections to this unit.
≥Turn on this unit.

1 Press [THEATER] to switch the remote control to operate this unit.

2 Press [DRIVE SELECT] to select the DVD drive.
The main unit: Press [SELECTOR] to select the DVD drive.

3 Insert a disc. (➡ page 12)

4 Press [►] (PLAY).
`RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW` `-RW(VR)`
Play starts from the most recently recorded title.
`DVD-V` `DVD-A` `CD` `VCD`
Play starts from the beginning of the disc.

5 Adjust the volume with [+ − VOLUME].

■ When a menu screen appears on the television
`DVD-V` `DVD-A`
Press [▲, ▼, ◄, ►]to select the item and press [ENTER].
Some items can also be selected using the numbered buttons.
`VCD`
Press the numbered buttons to select the item.
e.g., 5: [0] ➡ [5]   15: [1] ➡ [5]

≥**To return to the menu screen**
`DVD-V`   Press [DIRECT NAVIGATOR] or [SUB MENU].
`DVD-A`   Press [DIRECT NAVIGATOR].
`VCD`   Press [RETURN].

≥The playing method may differ from the one described above depending on disc types. Read the disc's instructions carefully.

Note
≥It is not possible to play continuously from one side of a double sided disc to the other. You will need to eject the disc and turn it over.
≥Depending on the disc, it may take time for the menu screen, pictures, sound, etc. to start.
≥Discs continue to rotate while menus are displayed. Press [■] when you have finished playback to protect the unit's motor, your television screen and so on.

Selecting recorded titles to play –Direct Navigator

`RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW` `-RW(VR)`
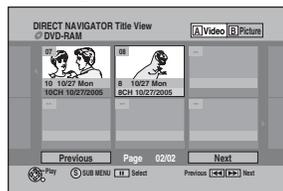Simply select the recorded titles you want to play from the menu.

1 Press [THEATER] to switch the remote control to operate this unit.

2 Press [DRIVE SELECT] to select the DVD drive.
The main unit: Press [SELECTOR] to select the DVD drive.

3 Insert a disc. (➡ page 12)

4 Press [DIRECT NAVIGATOR].

```
DIRECT NAVIGATOR Title View        A Video  B Picture
  DVD-RAM
  06                08
  10  10/27 Mon     8  10/27 Mon
  10CH 10/27/2005   8CH 10/27/2005

  Previous        Page  02/02        Next
  Play   S SUB MENU  II Select   Previous ◄◄ ►► Next
```

`RAM`
■**When the Album View screen is displayed**
Press [A] to switch to the Title View screen.

5 Press [▲, ▼, ◄, ►] to select the title and press [ENTER].
You can also select titles with the numbered buttons.
e.g., 5: [0] ➡ [5] 15: [1] ➡ [5]
To show other pages
Press [▲, ▼, ◄, ►] to select "Previous" or "Next" and press [ENTER].
≥You can also press [|◄◄, ►►|] to show other pages.

6 Adjust the volume with [+ − VOLUME].

To exit the screen
Press [DIRECT NAVIGATOR].
To change the sound quality (➡ page 35)

Direct Navigator screen icons

🔒	Title protected.
▨	Title that was not recorded due to recording protection (Digital broadcasts, etc.)
✕	Title cannot be played because data is damaged.
●	Currently recording.
▣	Title with "One time only recording" restriction

Note
≥`RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW` The unit stops playing a disc when scheduled recording starts.
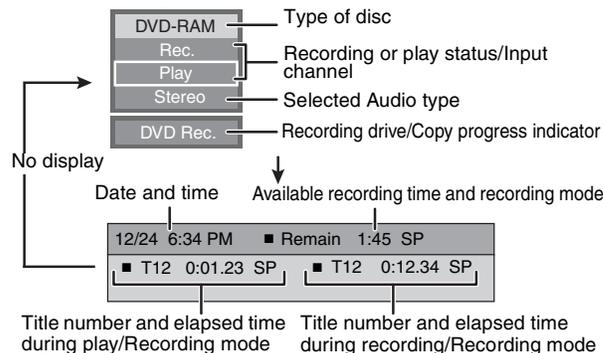≥`RAM` Press [►] (PLAY) when you wish to start playing the disc while recording (➡ page 13, "Chasing playback").
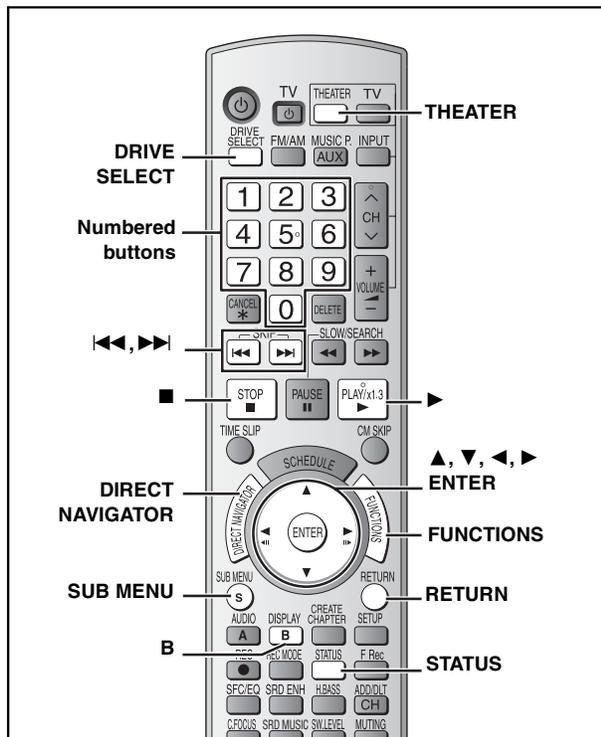
Status messages

Status messages appear on the television during operation to show the condition of the unit.

Press [STATUS].
The display changes each time you press the button.

```
DVD-RAM ──────── Type of disc
Rec. ┐
Play ┴────────── Recording or play status/Input channel
Stereo ───────── Selected Audio type
DVD Rec. ─────── Recording drive/Copy progress indicator
```

No display

Date and time   Available recording time and recording mode

```
12/24 6:34 PM    ■ Remain  1:45 SP
■ T12  0:01.23 SP      ■ T12  0:12.34 SP
```

Title number and elapsed time during play/Recording mode

Title number and elapsed time during recording/Recording mode

Operations during play

Stop	**Press [■].**
	The stopped position is memorized.
	Resume play function
	Press [▶] (PLAY) to restart from this position.
	● VCD Depending on the disc, resume play function may not be effective.
	●The stopped position is cleared when:
	  –You press [■] several times.
	  –You open the tray.
	  – DVD-A CD VCD You turn the unit off.

Pause	**Press [❙❙].** Press again or [▶] (PLAY) to restart play.
Search	**Press [◀◀] or [▶▶].** The speed increases up to 5 steps. (+R +R DL +RW up to 3 steps). ●Press [▶] (PLAY) to restart play. ●Audio is heard during first level search forward. DVD-A (excluding motion picture parts) CD Audio is heard during all levels of search. ●Depending on the disc, searching may not be possible.
Skip	**During play or while paused, press [❙◀◀] or [▶▶❙].** The unit will skip titles, chapters, or tracks according to the number of times the button is pressed and play will begin.

Starting from a selected item	**Press the numbered buttons.**
	Play starts from the selected title, chapter or track.
	e.g., 5: [0] ➜ [5] CD MP3 and JPEG/TIFF 5: [0] ➜ [0] ➜ [5]
	    15: [1] ➜ [5] 15: [0] ➜ [1] ➜ [5]
	    DVD-A Selecting groups
	    While stopped (screen saver is displayed on the television ➜ right)
	    5: [5]
	●This works only when stopped (screen saver is displayed on the television ➜ above) with some discs.
	● VCD (with playback control)
	  If you press the numbered buttons while stopped (the above screen saver is displayed on the television) you can cancel PBC. (Elapsed play time appears on the unit's display.)

Quick View RAM	**Press and hold [▶] (PLAY/×1.3).** Play speed is quicker than normal. ●Press again to return to normal speed.
Slow-motion RAM -R -R DL -RW(V) +R +R DL +RW DVD-V DVD-A (Motion picture parts only) -RW(VR) VCD	**While paused, press [◀◀] or [▶▶].** ●The speed increases up to 5 steps. ●Press [▶] (PLAY) to restart play. ● VCD Forward direction [▶▶] only. ●The unit will pause if slow-motion play is continued for approximately 5 minutes (excluding DVD-V DVD-A VCD).
Frame-by-frame RAM -R -R DL -RW(V) +R +R DL +RW DVD-V DVD-A (Motion picture parts only) -RW(VR) VCD	**While paused, press [◀❙❙] or [❙❙▶].** ●Each press shows the next frame. ●Press and hold to change forward or backward in succession. ●Press [▶] (PLAY) to restart play. ● VCD Forward direction [❙❙▶] only.
Skipping the specified time (Time Slip) RAM -R -R DL -RW(V) +R +R DL +RW -RW(VR)	**1 Press [TIME SLIP].** **2 Press [▲, ▼] to select the time and press [ENTER].** Play skips the specified time. ●Each time you press [▲, ▼], the time increases [▲] or decreases [▼] by 1 minute intervals. (Press and hold for 10-minute intervals.)
CM Skip RAM -R -R DL -RW(V) +R +R DL +RW -RW(VR)	**Press [CM SKIP].** Play restarts approximately a minute later.
Changing audio	**Press [AUDIO].** RAM -RW(VR) VCD Stereo → Mono L → Mono R ● RAM -RW(VR) When playing an SAP broadcast: Main Audio↔SAP Audio DVD-V DVD-A You can change the audio channel number each time you press the button. This allows you to change things like the soundtrack language. Soundtrack ◆ 1 ENG DD Digital 3/2.1ch e.g., DVD-V English is the selected language (➜ page 21, Soundtrack). ●You cannot change the audio type when a DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R, +R DL or +RW disc is in the disc tray while DVD drive is selected.
Create Chapter RAM (➜ Page 22, Title/Chapter)	**Press [CREATE CHAPTER].** Chapters are divided at the point pressed. ●Press [❙◀◀, ▶▶❙] to skip to the start of a chapter.

DVD
VIDEO
RAM

DVD-RAM
Play
Stereo

e.g., "Stereo" is selected

RQT8655

THEATER

DRIVE SELECT

Numbered buttons

|◀◀ , ▶▶|

■

▲, ▼, ◀, ▶

DIRECT NAVIGATOR

ENTER

FUNCTIONS

SUB MENU

RETURN

B

STATUS

▶

[RAM]
[SD] You can use SD Memory Cards with capacities from 8 MB to 2 GB (➡ page 7).
[CD] You can play CD-R, CD-RW discs which contain still pictures (JPEG/TIFF) that have been recorded on a computer.
≥You cannot playback still pictures while recording or copying.

Preparation
≥Press [THEATER] to switch the remote control to operate this unit.
≥Press [DRIVE SELECT] to select the DVD or SD drive.
≥Insert a disc (➡ page 12) or card (➡ page 8).

[CD]
The screen shown at right is displayed when you insert a disc containing MP3 files and still pictures (JPEG/TIFF).

> **Playback mode is set to MP3.**
> **To display pictures,**
> **please select Pictures Menu from FUNCTIONS.**
>
> **ENTER**

∎ To select Pictures Menu
1. Press [RETURN].
2. Press [FUNCTIONS].
3. Press [▲, ▼] to select "Menu" and press [ENTER].
4. Press [▲, ▼] to select "Pictures" and press [ENTER]. You can proceed to step 3 (➡ right).

> **Multimedia content**
>
> **Music and pictures on disc.**
> **Please select playback mode.**
>
> **MP3 Music**
> **Pictures**
>
> **ENTER**

If you switch to MP3 menu again
Select "MP3 Music" in step 4.

[SD]
While stopped and SD card has been inserted, "SD Card Operations" screen (➡ right) is automatically displayed. Press [▲, ▼] to select "Go to Album View" and press [ENTER]. You can proceed to step 2 (➡ right).

> **SD Card Operations**
>
> **SD Card inserted.**
> **Select an action or press RETURN.**
>
> **Go to Album View**
> **Copy pictures**
>
> **ENTER**

---

1 Press [DIRECT NAVIGATOR].

[RAM] [SD] Album View screen is displayed (➡ go to step 2).

> **DIRECT NAVIGATOR Album View**
> **⌸ DVD-RAM   Ⓐ Video Ⓑ Picture**
> 001 002
> 10/27/05 10/27/05 Total 4
> Photo: 10/27/2005 DVD
> **Previous   Page 01/01   Next**
> **⌸ ENTER Ⓢ SUB MENU ▶ Slideshow   Press ENTER to go to Picture View**

e.g., [RAM]

Recording date of first picture in the album/ Number of pictures/ Album name*
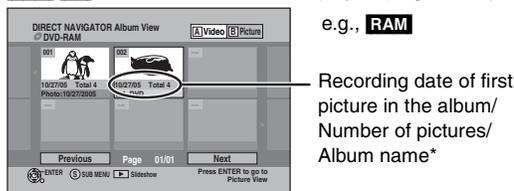
* Depending on the digital camera, the editing software on the PC etc., the information about the recording date may not be displayed. In this case, the date will appear as "--/--/--".

[RAM]
∎When the Title View screen is displayed
Press [B] to switch to the Album View screen.

[CD] Picture View screen is displayed (➡ go to step 3).

> **Pictures Menu   Picture View**
> **⌸ CD(JPEG)**
> **Folder   Folder001**
> 001 002 003 004
> 005 006 007 008
> 009
> **Previous   Page 01/01   Next**
> **⌸ ▶Play**
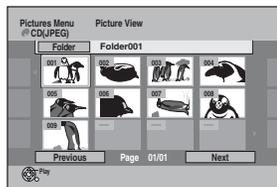
Thumbnails for large JPEG files and images with aspect ratios other than 4:3 may not display.

> **To show other pages**
> Press [▲, ▼, ◀, ▶] to select "Previous" or "Next" and press [ENTER].
> ≥You can also press [|◀◀, ▶▶|] to show other pages.
>
> **To select the higher folder (➡ page 19)**

2 Press [▲, ▼, ◀, ▶] to select the album and press [ENTER].
≥The Picture View screen of selected album is displayed.

> **DIRECT NAVIGATOR Picture View**
> **⌸ DVD-RAM   Ⓐ Video Ⓑ Picture**
> **Album Name   100_PANA**
> 0001 0002 0003 0004
> 0005 0006 0007 0008
> 0009
> **Previous   Page 001/001   Next**
> **⌸ ▶Play Ⓢ SUB MENU ▮▮ Select**
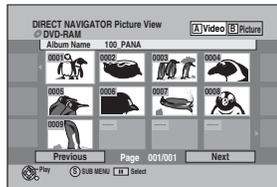
≥You can also select the album with the numbered buttons.
  e.g., 5: [0] ➡ [0] ➡ [5]
       15: [0] ➡ [1] ➡ [5]

3 Press [▲, ▼, ◀, ▶] to select the still picture and press [ENTER].
≥The selected still picture is displayed on the screen.
≥You can also select the still picture with the numbered buttons.

[RAM] [SD]
e.g., 5: [0] ➡ [0] ➡ [0] ➡ [5]
     15: [0] ➡ [0] ➡ [1] ➡ [5]

[CD]
e.g., 5: [0] ➡ [0] ➡ [5]
     15: [0] ➡ [1] ➡ [5]

[RAM] [SD] **To return to the Album View screen**
While the Picture View screen is displayed, press [RETURN].

To display the previous or next still picture during play
Press [◀, ▶].

To stop playing
Press [■].
The unit remembers the still picture where you stopped play. This is cleared when you turn the unit off or remove the disc or card.

To return to the previous screen
Press [RETURN].

To exit the screen
Press [DIRECT NAVIGATOR].

Direct Navigator screen icons

🔒 Picture or album protected (➡ page 27).

▶ Picture in which the number of prints is set (DPOF) (➡ page 27, 49).

Useful functions during still picture play

Start Slideshow

Slideshow settings

You can display still pictures one by one with constant interval.

RAM **SD** **While the Album View screen is displayed**

Press [▲, ▼, ◄, ►] to select the album and press [►] (PLAY).

You can also start slideshow with the following steps.
While the Album View screen is displayed
1 Press [▲, ▼, ◄, ►] to select the desired album and press [SUB MENU].
2 Press [▲, ▼] to select "Start Slideshow" and press [ENTER].

CD **While the Picture View screen is displayed**

1 Press [▲, ▼, ◄, ►] to select "Folder" and press [SUB MENU].
2 Press [▲, ▼] to select "Start Slideshow" and press [ENTER].

●**To change the display interval**
① Press [▲, ▼] to select "Slideshow settings" in step 2 and press [ENTER].
② Press [▲, ▼] to select "Display Interval" and press [◄, ►] to select the desired interval (0–30 seconds) and press [ENTER].

●**Repeat play**
① Press [▲, ▼] to select "Slideshow settings" in step 2 and press [ENTER].
② Press [▲, ▼] to select "Repeat Play" and press [◄, ►] to select "On" or "Off" and press [ENTER].

Rotate

Zoom in

Zoom out

While playing
1 Press [SUB MENU].
2 Press [▲, ▼] to select the item and press [ENTER].

| Rotate Right |
| Rotate Left |
| Zoom in |
| ⊚ ENTER |
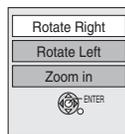
To return the rotated picture to its original position
Press [▲, ▼] to select the opposite rotation in step 2 and press [ENTER].

To return the picture to its original size
Press [▲, ▼] to select "Zoom out" in step 2 and press [ENTER].

●Rotation information will not be stored.
 –**CD** Still pictures
 –When disc or album is protected
 –When played on other equipment
 –When copying pictures
●If you remove the SD card while the Picture View screen is displayed, picture rotation information may not be properly stored. Make sure that you do not remove the SD card until the screen has closed.
●When zooming in, the picture may be cut off.
●The enlargement information will not be stored.
●The "Zoom in/Zoom out" function is only available for still pictures smaller than 640 x 480 pixels.

Properties

While playing
Press [STATUS] twice.

| 11/30 12:03 AM |
| Folder-Picture#:107-0002 |
| Date : 11/26/2005   No. :   2/ 30 |
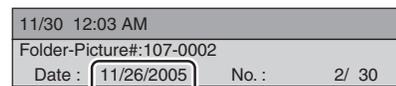
Recording date

To exit the picture properties screen
Press [STATUS] again.

■ To select the higher folder

RAM **SD** **While the Album View screen is displayed**
(Only if there is a multiple number of higher folders recognizable)
1 Press [SUB MENU].
2 Press [▲, ▼] to select "Select Root folder" and press [ENTER].
3 Press [◄, ►] to select the higher folder and press [ENTER].

CD **While the Picture View screen is displayed**
1 Press [▲, ▼, ◄, ►] to select "Folder" and press [ENTER].
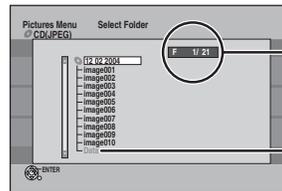
F: Selected folder no./ Total folder no.

Folders that contain no compatible files

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

Regarding still pictures (JPEG/TIFF)

RAM **SD**
●Compatible formats: DCF* compliant (Content recorded on a digital camera, etc.)
 * Design rule for Camera File system: unified standard established by Japan Electronics and Information Technology Industries Association (JEITA).
●File format: JPEG, TIFF (non-compressed RGB chunky format) Files must have the extension ".jpg", ".JPG", ".tif" and ".TIF".
●Number of pixels: between 34 x 34 and 6144 x 4096 pixels (Sub sampling is 4:2:2 or 4:2:0)
●This unit can handle a maximum of 3000 files and 300 folders (including higher folders).
●Operation may take time to complete when playing TIFF format still pictures, or when there are many files and/or folders, some files may not display or be playable.
●This unit is not compatible with MOTION JPEG.

CD
●Compatible formats: ISO9660 level 1 or 2 (except for extended formats) and Joliet
●File format: JPEG, TIFF (non-compressed RGB chunky format) Files must have the extension ".jpg", ".JPG", ".tif" and ".TIF".
●Number of pixels: between 34 x 34 and 6144 x 4096 pixels (Sub sampling is 4:2:2 or 4:2:0)
●This unit cannot play images that have resolutions beyond the range shown.
●Maximum number of files and folders recognizable: 999 files* and 99 folders (including the root folder)
 * Total number for all the MP3, JPEG and other type of files
●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 and/or folders and some may not display or be playable.
●English alphabet and Arabic numerals are displayed correctly. Other characters may not be displayed correctly.
●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 and folders 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.
●Operation may take time to complete when playing TIFF format still pictures, or when there are many files and/or folders, some files may not display or be playable.
●The unit is not compatible with MOTION JPEG.

- -

●You can play 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.
●When the highest level folders are "DCIM" folders, they are displayed first on the tree.

Structure of still pictures (JPEG/TIFF)
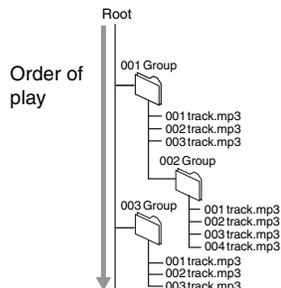Files inside a folder are displayed in the order they were updated or taken.

Order of play

DRIVE SELECT

Numbered buttons

$\blacktriangleleft\blacktriangleleft$, $\blacktriangleright\blacktriangleright$

$\blacksquare$

DIRECT NAVIGATOR

DISPLAY

THEATER

$\blacktriangle$, $\blacktriangledown$, $\blacktriangleleft$, $\blacktriangleright$
ENTER

RETURN
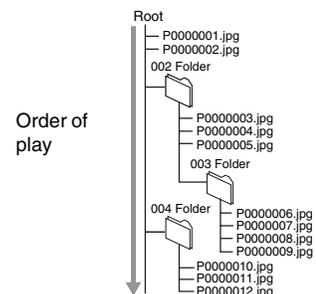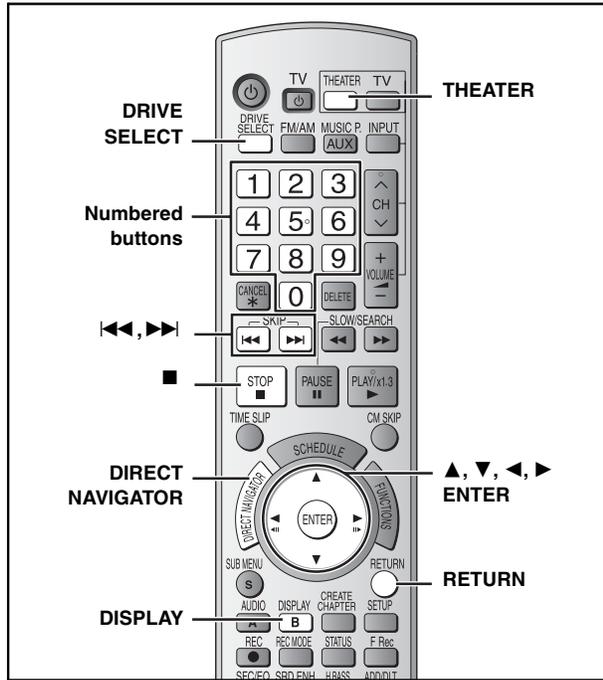
Regarding MP3
≥Compatible formats: ISO9660 level 1 or 2 (except for extended formats) and Joliet
≥File format: MP3
 Files must have the extension ".mp3" or ".MP3".
≥Maximum number of files (tracks) and folders (groups) recognizable: 999* files (tracks) and 99 folders (groups) (including the root folder)
 * Total number for all the MP3, JPEG and other type of files
≥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 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 may not display or be playable.
≥English alphabet and Arabic numerals are displayed correctly. Other characters may not be displayed correctly.
≥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-writing format.
≥Depending on the recording, some items may not be playable.
≥This unit is not compatible with ID3 tags.
≥If there is a large amount of still picture data etc. within a MP3 file, play may not be possible.

- -
≥You can play MP3 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.

Structure of MP3 folders
Prefix with 3-digit numbers in the order you want to play them.

Root

Order of play

001 Group
— 001 track.mp3
— 002 track.mp3
— 003 track.mp3
002 Group
— 001 track.mp3
003 Group
— 001 track.mp3
— 002 track.mp3
— 003 track.mp3
— 004 track.mp3
— 001 track.mp3
— 002 track.mp3
— 003 track.mp3

CD
≥You can play CD-R, CD-RW discs which contain MP3 files that have been recorded on a computer.
≥You may not be able to playback MP3 files which contain still pictures.

Preparation
≥Press [THEATER] to switch the remote control to operate this unit.
≥Press [DRIVE SELECT] to select the DVD drive.
≥Insert a disc (➡ page 12).

The screen shown at right is displayed when you insert a disc containing MP3 files and still pictures (JPEG/TIFF).
Press [ENTER], and follow the steps below.

Playback mode is set to MP3.
To display pictures,
please select Pictures Menu from FUNCTIONS.

ENTER

1 Press [DIRECT NAVIGATOR].

Selected group

G: Group no.
T: Track no. in the group
Total: Track no./Total track no. in all groups
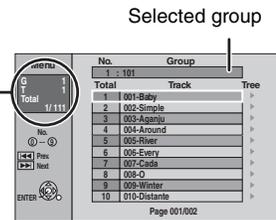
≥Files are treated as tracks and folders are treated as groups.

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

Play starts on the selected track.
≥"☞" indicates the track currently playing.
≥You can also select the track with the numbered buttons.
  e.g., 5: [0] ➡ [0] ➡ [5]
       15: [0] ➡ [1] ➡ [5]
To show other pages
Press [|◀◀] (Previous) or [▶▶|] (Next).

■**Using the tree screen to find a group**
1 Press [▶] while a track is highlighted to display the tree screen.

G:Selected group no. /Total group no.
If the group has no track, "– –" is displayed as group number.
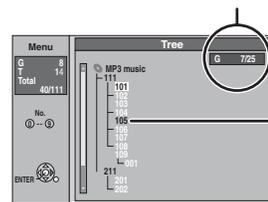
Groups that contain no compatible files

2 Press [▲, ▼] to select a group and press [ENTER].
The file list for the group appears.

To stop playing
Press [■].

To return to the previous screen
Press [RETURN].

To switch to Pictures menu
(➡ page 18, "To select Pictures Menu")

To exit the screen
Press [DIRECT NAVIGATOR].

Using on-screen menus

Common procedures

1 Press [DISPLAY].

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

Menu **Item** **Setting**

● Depending on the condition of the unit (playing, stopped, etc.) and disc contents, there are some items that you cannot select or change.

2 Press [▲, ▼] to select the menu and press [▶].

3 Press [▲, ▼] to select the item and press [▶].

4 Press [▲, ▼] to select the setting.
● Some items can be changed by pressing [ENTER].

To clear the on-screen menus
Press [DISPLAY].

Disc menu–Setting disc content

Soundtrack* `DVD-V` `DVD-A`
Select the audio and language (➡ below, Audio attribute, Language).
`RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW` `-RW(VR)`
The disc's audio attributes appear.

Subtitle* `DVD-V` `DVD-A`
Turn the subtitle on/off and select the language
(➡ below, Language).
`RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW` `-RW(VR)`
(Only discs that contain subtitle on/off information)
● Subtitle on/off information cannot be recorded using this unit.
● If the subtitles overlap closed captions recorded on discs, turn the subtitles off.

Audio channel `RAM` `-RW(VR)` `VCD`
(➡ page 17, Changing audio)

Angle* `DVD-V` `DVD-A`
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 ➡ page 49) `VCD`
Indicates whether menu play (playback control) is on or off. (unchangeable).

* With some discs, you may only be able to make changes using the menus (➡ page 16) on the disc.
● The display changes according to the disc content. You cannot change anything when there is no recording.

Audio attribute	
LPCM/PPCM/ᴰᴰDigital/DTS/MPEG:	Signal type
k (kHz):	Sampling frequency
b (bit):	Number of bits
ch (channel):	Number of channels

Language

ENG:	English	DAN:	Danish	THA:	Thai
FRA:	French	POR:	Portuguese	POL:	Polish
DEU:	German	RUS:	Russian	CES:	Czech
ITA:	Italian	JPN:	Japanese	SLK:	Slovak
ESP:	Spanish	CHI:	Chinese	HUN:	Hungarian
NLD:	Dutch	KOR:	Korean	FIN:	Finnish
SVE:	Swedish	MAL:	Malay	✳:	Others
NOR:	Norwegian	VIE:	Vietnamese		

Play menu–Change play sequence

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.
Repeat play
● All `CD` `VCD`
● Chapter `RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW` `DVD-V` `-RW(VR)`

● Group `DVD-A` and MP3
● Playlists `RAM` `-RW(VR)`
● Title `RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW` `DVD-V` `-RW(VR)`
● Track `DVD-A` `CD` `VCD` and MP3
Select "Off" to cancel.

Video menu–Change picture quality

Picture

`RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW` `DVD-V` `DVD-A` `-RW(VR)` `VCD`
Select the picture mode
● **Normal:** Default setting
● **Soft:** Soft picture with fewer video artifacts
● **Fine:** Details are sharper
● **Cinema:** Mellows movies, enhances detail in dark scenes.

DNR

`RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW` `DVD-V` `DVD-A` `-RW(VR)` `VCD`
Reduces mosaic-like distortion and picture degradation.
On⟵⟶Off

Progressive
Only when you have selected "480p" in "TV Type" (➡ Setup Guide, page 14).
Select "On" to enable progressive output.
● Select "Off" if the picture is stretched horizontally.
● When progressive output is on, closed captions cannot be displayed.

Transfer [Only when "Progressive" (➡ above) is set to "On".]
Select the method of conversion for progressive output to suit the type of material being played (➡ page 49, Film and video).
● **Auto1 (normal):**
Automatically detects the film and video content, and appropriately converts it.
● **Auto2:** In addition to "Auto1", automatically detects film contents with different frame rates and appropriately converts it.
● **Video:** Select when using "Auto1" or "Auto2", and the video content is distorted.

Line-in NR (Only when IN1 or IN2 is selected.)
Reduces video tape noise while copying.
Depending on the video signal, 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.

Audio menu–Change sound effect

Dialog Enhancer

`RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW` `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.
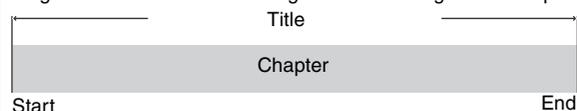
Other menu–Change the display position

Position
1 (Standard) - 5: The higher the setting the lower the on-screen menu moves.

Editing titles/chapters

DRIVE SELECT

THEATER

|◄◄ , ►►|

◀ ◀

DIRECT NAVIGATOR

**▲, ▼, ◄, ►
ENTER**

SUB MENU

RETURN

A
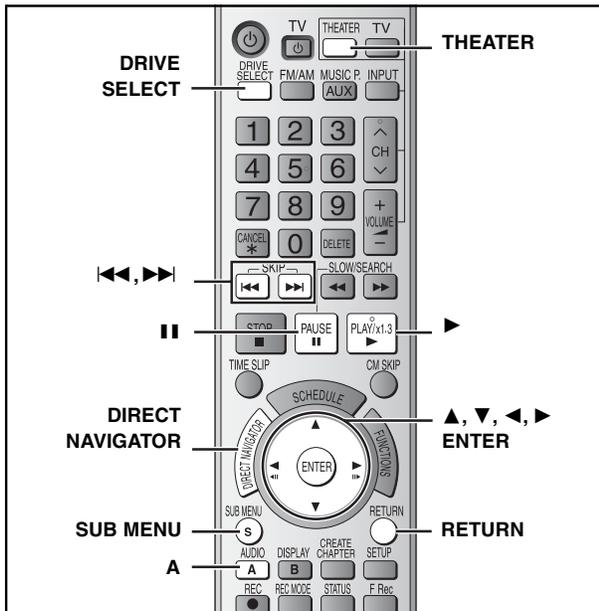
`RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW` `-RW(VR)`

Title/Chapter

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

Title

Chapter

Start   End

↓

`RAM` You can divide a title into multiple chapters. Each section between the division points becomes a chapter.
(➔ page 17, 23, Create Chapter)

Title

| Chapter | Chapter | Chapter | Chapter |

↓

`RAM` You can change the order of chapters and create a playlist (➡ page 24).

- `-R` `-R DL` `-RW(V)` `+R` `+R DL` Titles are divided into about 5-minute (`+R` `+R DL` 8-minute) chapters after finalizing (➡ page 33).
- `-R DL` `+R DL` Titles are not divided into chapters after finalizing.

●The maximum number of items on a disc:
   `RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW`
   –Titles: 99 (`+R` `+R DL` `+RW` 49 titles)
   –Chapters: Approximately 1000
                      (`+R` `+R DL` `+RW` Approximately 250)
                      Depends on the state of recording.

Note
- Once deleted, divided or shortened, a title cannot be restored to its original state. Make certain before proceeding.
- You cannot edit during recording.
- `+RW` You can create a Top Menu using "Create DVD Top Menu" (➡ page 33). Recording or editing on the disc may delete the menu. In that case, create the menu again.
- `+R` `+R DL` Management information is recorded in unused sections when you edit discs. The available space on these discs decreases each time you edit their contents.

Preparation
- Turn on the television and select the appropriate video input to suit the connections to this unit.
- Turn the unit on.
- Press [THEATER] to switch the remote control to operate this unit.
- Press [DRIVE SELECT] to select the DVD drive.
- Insert a disc (➡ page 12).
- `RAM` Release disc or cartridge protection (➡ page 32).

Editing titles/chapters and playing chapters

1 **During play or while stopped**
   Press [DIRECT NAVIGATOR].
   `RAM`
   ■**When the Album View screen is displayed**
   Press [A] to switch to the Title View screen.

2 **Press [▲, ▼, ◄, ►] to select the title.**
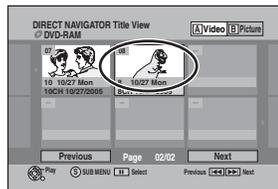
To show other pages
Press [▲, ▼, ◄, ►] to select "Previous" or "Next" and press [ENTER].
●You can also press [|◄◄, ►►|] to show other pages.
Multiple editing
Select with [▲, ▼, ◄, ►] and press [▌▌]. (Repeat.)
A check mark appears. Press [▌▌] again to cancel.

3 **Press [SUB MENU], then [▲, ▼] to select the operation and press [ENTER].**
   ●If you select "Edit Title", press [▲, ▼] to select the operation and press [ENTER].

	Title Name
Delete Title	Set Protection
Properties	Cancel Protection
Edit Title	Shorten Title
	Change Thumbnail
	Divide Title

Refer to "Title operations" (➡ page 23).

| View Chapters |
| Album View |

Using menus to play still pictures (➡ page 18)
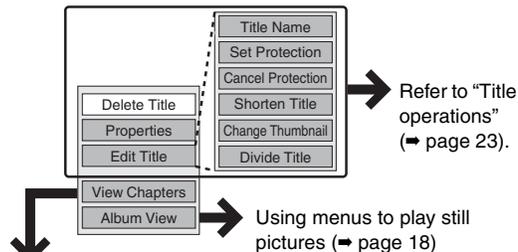
If you select "View Chapters" (➡ Step 4)

4 **Press [▲, ▼, ◄, ►] to select the chapter.**
   To start play ➡ Press [ENTER].
   To edit ➡ Step 5
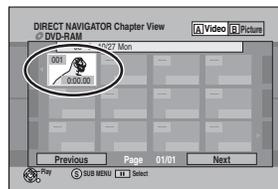
●**To show other pages/Multiple editing (➡ above)**

5 **Press [SUB MENU], then press [▲, ▼] to select the operation and press [ENTER].**

| Delete Chapter |
| Create Chapter |
| Combine Chapters |
| View Titles |

Refer to "Chapter operations" (➡ page 23).
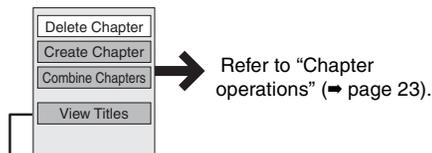
●You can go back to Title View.

To return to the previous screen
Press [RETURN].
To exit the screen
Press [DIRECT NAVIGATOR].

Title operations

After performing steps 1–3 (→ page 22)

Delete Title* RAM -R -R DL -RW(V) +R +R DL +RW	**Press [◄, ►] to select "Delete" and press [ENTER].** ●**Once deleted, the recorded contents are lost and cannot be restored.** Make certain before proceeding. ●-R -R DL +R +R DL The available recording space does not increase when you delete titles. ●-RW(V) +RW Available recording space increases only when the last recorded title is deleted. It does not increase if other titles are deleted.
Properties RAM -R -R DL -RW(V) +R +R DL +RW -RW(VR)	Information (e.g., time and date) is shown. ●Press [ENTER] to exit the screen.
Title Name RAM -R -R DL -RW(V) +R +R DL +RW	You can give names to recorded titles. ➡ page 31, Entering text
Set Protection* **Cancel Protection*** RAM +R +R DL +RW	If set, this will protect the title from accidental deletion. **Press [◄, ►] to select "Yes" and press [ENTER].** The lock symbol appears when the title is protected. ●When the title is protected, some items cannot be accessed. Release the protection to access the inaccessible items.
Shorten Title RAM (➡ below, "For quicker editing")	You can remove unnecessary parts of the recording. ① **Press [ENTER] at the start point and end point of the section you want to delete.** ② **Press [▲, ▼] to select "Exit" and press [ENTER].** Select "Next" and press [ENTER] to delete other sections. ③ **Press [◄, ►] to select "Delete" and press [ENTER].**
Change Thumbnail RAM -R -R DL -RW(V) +R +R DL +RW (➡ below, "For quicker editing")	You can change the image to be shown as the thumbnail picture in the Title View. ① **Press [►] (PLAY) to start play.** ② **Press [ENTER] when the image you want to use as a thumbnail is shown.** **To change the thumbnail** Restart play and press [▲, ▼] to select "Change", then press [ENTER] at the point you want to use as the thumbnail. ③ **Press [▲, ▼] to select "Exit" and press [ENTER].**
Divide Title RAM (➡ below, "For quicker editing")	You can divide a title into two. ① **Press [ENTER] at the point you want to divide the title.** ② **Press [▲, ▼] to select "Exit" and press [ENTER].** ③ **Press [◄, ►] to select "Divide" and press [ENTER].** **To confirm the division point** Press [▲, ▼] to select "Preview" and press [ENTER]. (The unit plays 10 seconds before and after the division point.) **To change the division point** Restart play and press [▲, ▼] to select "Divide", then press [ENTER] at the point you want to divide. **Note** ●The divided titles retain the name and CPRM property (➡ page 49) of the original title. ●Video and audio just before and after the dividing point may momentarily be cut out. Make certain using "Preview" function (➡ above) before proceeding.

* Multiple editing is possible.

Chapter operations

After performing steps 1–5 (➡ page 22)

Delete Chapter* RAM	**Press [◄, ►] to select "Delete" and press [ENTER].** ●**Once deleted, the recorded contents are lost and cannot be restored.** Make certain before proceeding. ●To delete only the chapter division point, use "Combine Chapters." (➡ below) The recorded contents are not deleted.
Create Chapter RAM (➡ below, "For quicker editing")	Select the point where you want to start a new chapter while viewing the title. ① **Press [ENTER] at the point you want to divide.** ●Repeat this step to divide at other points. ② **Press [▲, ▼] to select "Exit" and press [ENTER].**
Combine Chapters RAM	**Press [◄, ►] to select "Combine" and press [ENTER].** ●The selected chapter and following chapter are combined.

* Multiple editing is possible.

For quicker editing
●Use search, Time Slip or slow-motion (➡ page 17) to find the desired point.
●To skip to the start or end of a title, press [|◄◄] (start) or [►►|] (end).

RQT8655

THEATER

DRIVE SELECT

▲, ▼, ◄, ►

ENTER

FUNCTIONS

SUB MENU

RETURN
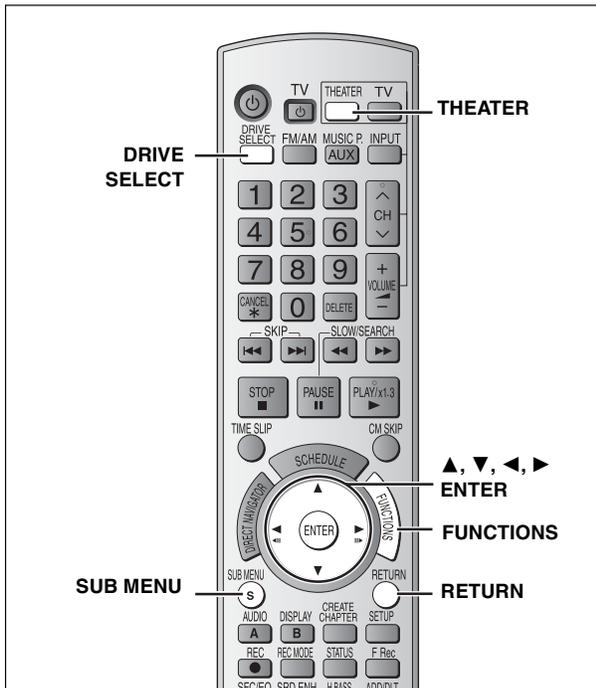
You can arrange the chapters (➡ page 22) to create a playlist.

←——— Title ———→	←——— Title ———→
Chapter	Chapter	Chapter	Chapter	Chapter

Playlist	Chapter	Chapter
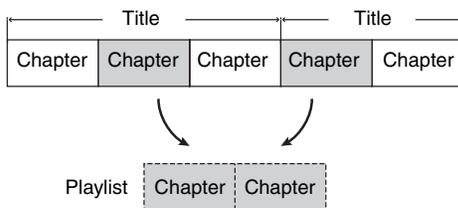
≥Editing playlists doesn't modify the recorded data. Playlists are not recorded separately so this doesn't use much capacity.
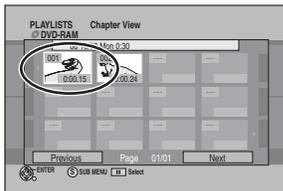≥You cannot create or edit a playlist while recording.

RAM
≥The maximum number of items on a disc:
–Playlists: 99
–Chapters in playlists: 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.

Preparation
≥Turn on the television and select the appropriate video input to suit the connection to this unit.
≥Turn the unit on.
≥Press [THEATER] to switch the remote control to operate this unit.
≥Press [DRIVE SELECT] to select the DVD drive.
≥Insert a disc (➡ page 12).
≥Release disc or cartridge protection (➡ page 32).

Creating playlists

1 While stopped
Press [FUNCTIONS].

2 **Press [▲, ▼] to select "Other Functions" and press [ENTER].**

> DIGA FUNCTIONS
> Cartridge Protection Off
> DVD-RAM   Disc Protection Off
> Playback   Playlists
> Recording   Flexible Recording
> Erase   DV Camcorder Rec.
> Copy   Setup
> Other Functions DVD Management
> ENTER
> RETURN

3 **Press [▲, ▼] to select "Playlists" and press [ENTER].**

4 **Press [▲, ▼, ◄, ►] to select "Create" and press [ENTER].**

> PLAYLISTS   Playlist View
> DVD-RAM
> Create
> Previous   Page 01/01   Next
> ENTER
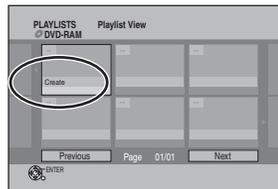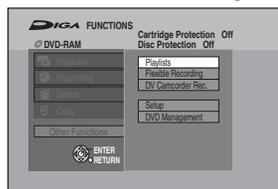
5 **Press [◄, ►] to select the source title and press [▼].**
Press [ENTER] to select all the chapters in the title, then skip to step 7.

> PLAYLISTS   Create
> DVD-RAM
> 08 8 10/30 Mon
> Source Title   Page 01/01
> 01
> 001 002 003   Page 001/001
> Chapters in Playlist   Page 001/001
> ENTER SUB MENU Press RETURN to exit.
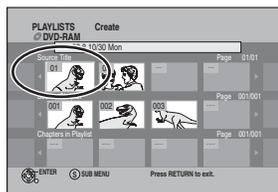
6 **Press [◄, ►] to select the chapter you want to add to a playlist and press [ENTER].**
Press [▲] to cancel.

> PLAYLISTS   Create
> DVD-RAM
> 08 8 10/30 Mon
> Source Title   Page 01/01
> 01
> Source Chapter   Page 001/001
> 001 002 003
> Chapters in Playlist   Page 001/001
> ENTER SUB MENU Press RETURN to exit.
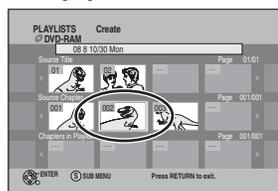
≥You can also create a new chapter from the source title. Press [SUB MENU] to select "Create Chapter" and press [ENTER] (➡ page 23, "Create Chapter").

7 **Press [◄, ►] to select the position to insert the chapter and press [ENTER].**

> PLAYLISTS   Create
> DVD-RAM
> 08 8 10/30 Mon
> Source Title   Page 01/01
> 01
> Source Chapter   Page 001/001
> 001 002 003
> Chapters in Playlist   Page 001/001
> Press RETURN to exit.
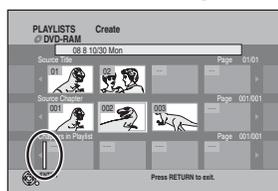
≥Press [▲] to select other source titles.
≥Repeat steps 5–7 to add other chapters.

8 **Press [RETURN].**
All the selected scenes become the playlist.

To return to the previous screen
Press [RETURN].

To exit the screen
Press [RETURN] several times.

Editing and playing playlists/chapters

`RAM`

`-RW(VR)` (Play only)

1 **While stopped**

Press [FUNCTIONS].

2 **Press [▲, ▼] to select "Other Functions" and press [ENTER].**

3 **Press [▲, ▼] to select "Playlists" and press [ENTER].**

4 **Press [▲, ▼, ◄, ►] to select the playlist.**
To start play ➡ Press [ENTER].
To edit ➡ Step 5

```
PLAYLISTS    Playlist View
⊘ DVD-RAM

    10/30 Mon 0:30   Create

         Previous     Page  01/01    Next
  ⊙ ENTER  ⊙ SUB MENU  ⏸ Select
```
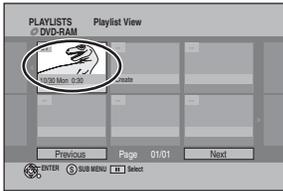
● **To show other pages/Multiple editing (➔ page 22)**

5 **Press [SUB MENU], then press [▲, ▼] to select the operation and press [ENTER].**
● If you select "Edit", press [▲, ▼] to select the operation and press [ENTER].

```
                        Create
                        Copy          Refer to "Playlist
        Delete Playlist  Playlist Name  operations"
        Properties       Change Thumbnail  (➡ right).
        Edit

        View Chapters
```
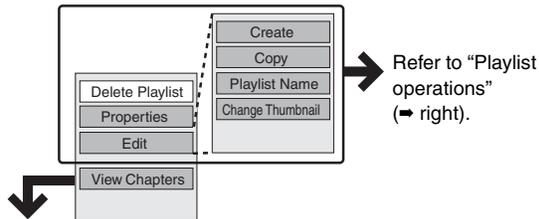
If you select "View Chapters" (➡ Step 6)

6 **Press [▲, ▼, ◄, ►] to select the chapter.**
To start play ➡ Press [ENTER].
To edit ➡ Step 7

```
PLAYLISTS    Chapter View
⊘ DVD-RAM
         08 10/27 Mon 0:30
    001          002
    0:00.15      0:00.24

         Previous     Page  01/01    Next
  ⊙ ENTER  ⊙ SUB MENU  ⏸ Select
```

● **To show other pages/Multiple editing (➡ page 22)**

7 **Press [SUB MENU], then press [▲, ▼] to select the operation and press [ENTER].**

```
        Add Chapter
        Move Chapter
        Create Chapter   Refer to "Chapter operations"
        Combine Chapters  (➡ right).
        Delete Chapter
        View Playlists
```
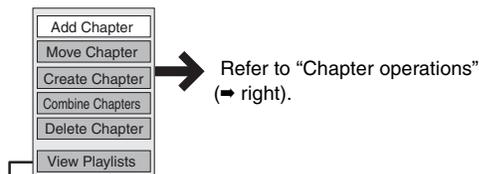
● You can go back to the Playlist View.

To return to the previous screen
Press [RETURN].

To exit the screen
Press [RETURN] several times.

Playlist operations

After performing steps 1–5 (➡ left)

Delete Playlist* `RAM`	**Press [◄, ►] to select "Delete" and press [ENTER].** **Once deleted, the playlists are lost and cannot be restored.** Make certain before proceeding.
Properties `RAM` `-RW(VR)`	Playlist information (e.g., length and date) is shown. ● Press [ENTER] to exit the screen. Properties — Dinosaur — Number 01, Chapters: 012, Date: 6/20/2004 Wed, Length: 0:30.05 — ENTER
Create `RAM`	➡ page 24, Creating playlists, steps 5–8
Copy* `RAM`	**Press [◄, ►] to select "Copy" and press [ENTER].** ● The copied playlist becomes the newest one in the playlist view screen.
Playlist Name `RAM`	➡ page 31, Entering text
Change Thumbnail `RAM`	➡ page 23, Change Thumbnail

*Multiple editing is possible.

Chapter operations

`RAM`

After performing steps 1–7 (➡ left)
● Editing chapters in a playlist does not modify the source titles and source chapters.

Add Chapter	➡ page 24, Creating playlists, steps 5–8
Move Chapter	**Press [▲, ▼, ◄, ►] to select the position to insert the chapter and press [ENTER].** PLAYLISTS ⊘ DVD-RAM Move Chapter — 08 10/27 Mon 0:30 — 001 0:00.15 002 0:00.3 — Previous Page 01/01 Next — ⊙ ENTER
Create Chapter	➡ page 23, Create Chapter
Combine Chapters	➡ page 23, Combine Chapters
Delete Chapter*	➡ page 23, Delete Chapter The playlist itself is deleted if you delete all the chapters in it.
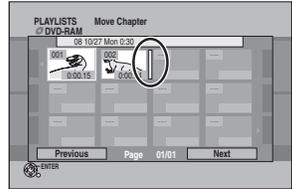
*Multiple editing is possible.
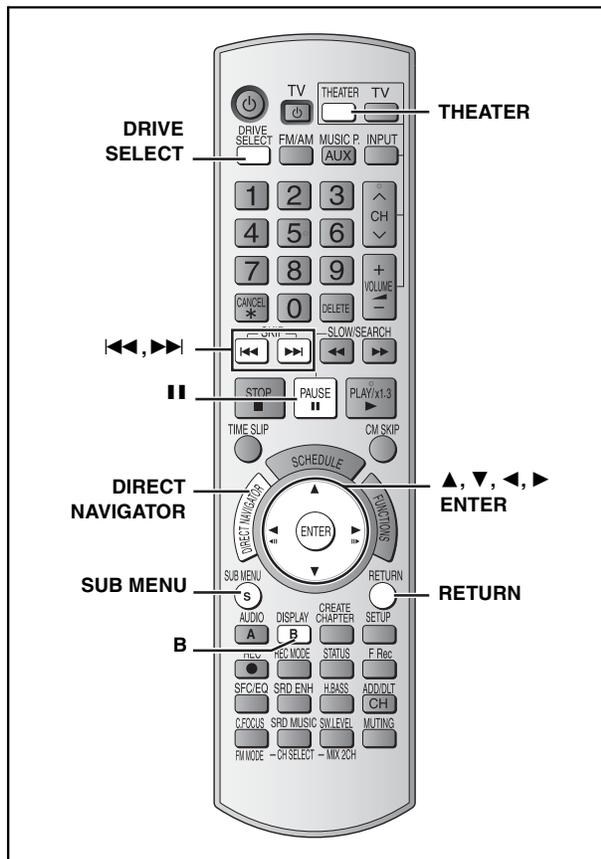
1 Press [DIRECT NAVIGATOR].

```
DIRECT NAVIGATOR Album View          A Video  B Picture     e.g., RAM
DVD-RAM
  001                002
  10/27/05  Total 4   10/27/05  Total 4
  Photo: 10/27/2005   101_DVD

     Previous        Page  01/01        Next
  ENTER  S SUB MENU  ▶ Slideshow    Press ENTER to go to
                                     Picture View
```

RAM
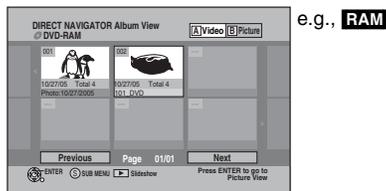
■ When the Title View screen is displayed
Press [B] to switch to the Album View screen.

2 Editing an album:

Press [▲, ▼, ◀, ▶] to select the album to edit.

≥When you want to create an album, go to step 3 without selecting the album and select "Create Album".

Editing a still picture:

1. **Press [▲, ▼, ◀, ▶] to select the album which contains the still picture to edit and press [ENTER].**
2. **Press [▲, ▼, ◀, ▶] to select the still pictures to edit.**

To show other pages
Press [▲, ▼, ◀, ▶] to select "Previous" or "Next" and press [ENTER].
≥You can also press [|◀◀, ▶▶|] to show other pages.

Multiple editing
Select with [▲, ▼, ◀, ▶] and press [❙❙]. (Repeat.)
≥A check mark appears. Press [❙❙] again to cancel.

3 Press [SUB MENU], then press [▲, ▼] to select the operation and press [ENTER].

If you select "Edit Album", press [▲, ▼] to select the operation and press [ENTER] (➡ page 27).

≥**To edit the album** (e.g., **SD**)

```
  Start Slideshow          Refer to "Useful functions during still
  Slideshow settings       picture play" (➡ page 19).

  Add Picture       Album Name
  Create Album      Delete Album          Refer to "Album and
  Edit Album        Protection Setup      picture operations"
                    Cancel Protection     (➡ page 27).
  Select Root folder
```
To select another folder (➡ below)
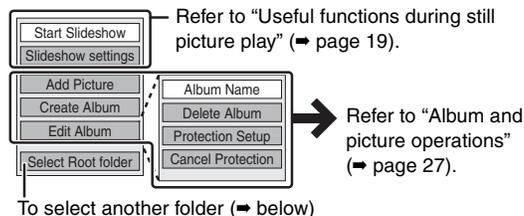
≥**To edit still pictures** (e.g., **SD**)

```
  Delete Picture
  Set Protection          Refer to "Album and
  Cancel Protection       picture operations"
  Print Order (DPOF)      (➡ page 27).
  Album View
```
You can go back to the Album View.
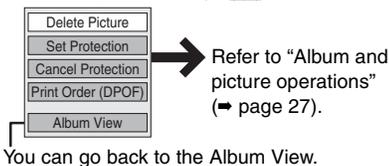
To exit the screen
Press [DIRECT NAVIGATOR].

To return to the previous screen
Press [RETURN].

■ To select the higher folder
While the Album View screen is displayed
(Only if there is a multiple number of higher folders recognizable)
1. Press [SUB MENU].
2. Press [▲, ▼] to select "Select Root folder" and press [ENTER].
3. Press [◀, ▶] to select the higher folder and press [ENTER].

Remote control labels (left diagram)
- THEATER
- DRIVE SELECT
- ▲, ▼, ◀, ▶ ENTER
- DIRECT NAVIGATOR
- SUB MENU
- RETURN
- B

RAM SD
≥You can edit still pictures or albums.
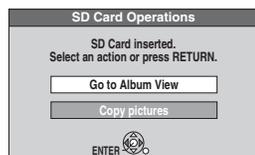≥You can use SD Memory Cards with capacities from 8 MB to 2 GB (➡ page 7).
≥You cannot edit still pictures recorded on CD-R/CD-RW.

Preparation
≥Press [THEATER] to switch the remote control to operate this unit.
≥Press [DRIVE SELECT] to select the DVD or SD drive.
≥Insert a disc (➡ page 12) or card (➡ page 8).
≥Release protection (➡ page 32).

Album and picture operations

After performing steps 1–4 (➡ page 26)

Delete Album* **Delete Picture*** RAM SD	**Press [◀, ▶] to select "Delete" and press [ENTER].** ●**Once deleted, the recorded contents are lost and cannot be restored.** Make certain before proceeding. ●When deleting an album, files other than still picture files inside the album will also be deleted. (This does not apply to albums under the album concerned.)
Album Name RAM SD	You can give names to albums. (➡ page 31, Entering text) ●Album names input using this unit may not be displayed on other equipment.
Protection Setup* **Set Protection*** **Cancel Protection*** RAM SD	If set, this will protect the still picture or album from accidental deletion. **Press [◀, ▶] to select "Yes" and press [ENTER].** The lock symbol appears when the still picture or album is protected. ●Even if the protection setting is used by this unit to protect an album, the album may be deleted by another unit.
Print Order (DPOF)* SD	You can select individual pictures for printing and specify the number of prints to be made. **Press [◀, ▶] to select number of print (0 to 9) and press [ENTER].** The DPOF mark appears. **To cancel the print setting** Set the number of prints to "0". ●Print settings (DPOF) made using this unit may not be viewable on other equipment. ●When this is set by this unit, any settings established by other units will be released. ●Settings cannot be made for files not in accordance with DCF standards or if there is no remaining space on the card.
Add Picture **Create Album** RAM SD	① **Press [◀, ▶] to select "Start" or "Yes" and press [ENTER].** ② **Press [▲, ▼, ◀, ▶] to select the album which contains the still picture you want to add and press [ENTER].** ③ **Press [▲, ▼] to select the item and press [ENTER].** ■**If "Select pictures to copy" is selected** Press [▲, ▼, ◀, ▶] to select the picture and press [ENTER]. ■**If "Copy all pictures" is selected** All the still pictures in album will be copied. ④ **Press [◀, ▶] to select "Yes" or "No" and press [ENTER].** If you want to continue copying, select "Yes" and go to step ②. ⑤ **Only when you select "Create Album"** **Press [◀, ▶] to select "Yes" or "No" and press [ENTER].** ●If "Yes" is selected, you can give a name to the album (➡ page 31, Entering text). ●If "No" is selected, the shooting date of the first picture in the album becomes the album name. (If there is no shooting date information, the date will appear as "--/--/--".)
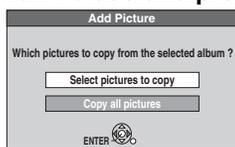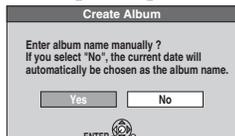
* Multiple editing is possible.

Note
●Scheduled recordings do not start when performing "Add Picture" or "Create Album".
●You cannot perform "Add Picture" or "Create Album" to a higher folder.

Copying still pictures

THEATER

DRIVE SELECT

Numbered buttons

|◀◀ , ▶▶|

II

▲ , ▼ , ◀ , ▶ ENTER

FUNCTIONS

SUB MENU

RETURN
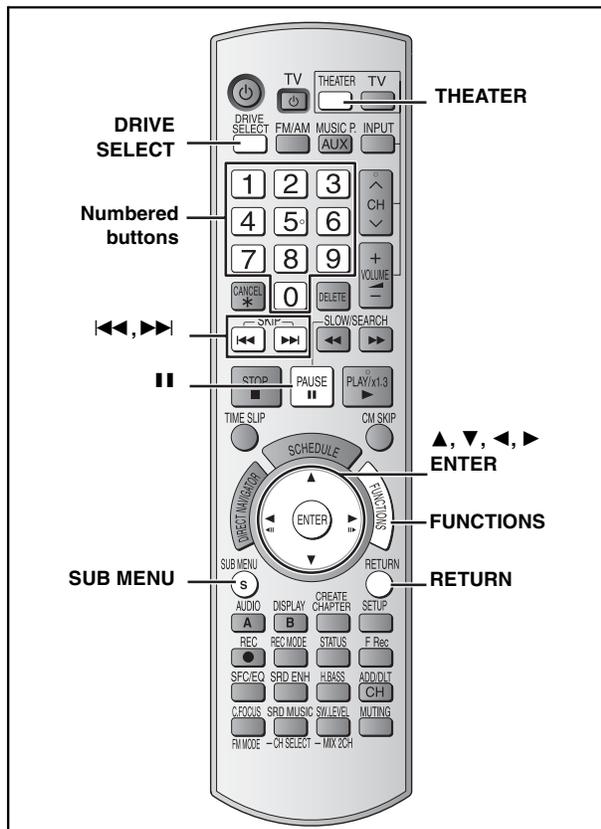
[RAM] [SD]
≥You can use SD Memory Cards with capacities from 8 MB to 2 GB (➡ page 7).
≥You cannot copy still pictures recorded on CD-R/CD-RW.

[SD]
While stopped and SD card has been inserted, "SD Card Operations" screen (➡ right) is automatically displayed. Press [▲, ▼] to select "Copy pictures" and press [ENTER]. You can proceed to step 4 of "Copying all the still pictures on a card – Copy All Pictures (JPEG)" (➡ right).
≥**To exit the screen**
Press [RETURN].

SD Card Operations

SD Card inserted.
Select an action or press RETURN.

Go to Album View

Copy pictures

ENTER

Note
≥When copying the still pictures on a folder by folder basis or using "Copy All Pictures (JPEG)" function (➡ right), files other than the still picture files inside the folder will also be copied. (This does not apply to the lower folders contained inside the folders.)
≥If still pictures are already contained inside the copying destination folder, the new still pictures are recorded following the existing still pictures.
≥If the space on the destination drive runs out or the number of files/folders to be copied exceeds the maximum (➡ page 19), copying will stop partway through.
≥When a name has not been input for the copying source folder, it is possible that this folder's name will not be the same on the copying destination. It is recommended that you input a folder name before copying (➡ page 27, Album Name).
≥You cannot copy the information about the print number setting (DPOF) or the picture rotation.
≥The sequence in which the still pictures are registered on the copying list may not be the same at the copying destination.

Preparation
≥Press [THEATER] to switch the remote control to operate this unit.
≥Press [DRIVE SELECT] to select the DVD or SD drive.
≥Insert a disc (➡ page 12) and/or card (➡ page 8).
≥Release protection (➡ page 32).

Copying using the copying list

1 **While stopped**
   Press [FUNCTIONS].

2 **Press [▲, ▼] to select "Copy" and press [ENTER].**

3 **Press [▲, ▼] to select items and press [▶] to make settings.**

   Copy

   Cancel All

   1 Copying Direction
   DVD ➡ SD card ▶

   2 Mode
   Picture High Speed

   3 Create List   o

   Start Copying

   1 Copying Direction
   DVD ➡ SD card

   3 Create List   o

   Refer to "Copying settings" (➡ page 29).

   "Recording Mode" is automatically set to "High Speed". You cannot change "Mode" setting.

4 **Press [▲, ▼] to select "Start Copying" and press [ENTER].**
   ≥For individual still pictures only
   When specifying another folder as the copying destination, select "Folder".

   Folder   New
   Do you want to cr

5 **Press [◀, ▶] to select "Yes" and press [ENTER] to start copying.**

■ **To cancel all settings**
1 **Press [▲, ▼] to select "Cancel All" and press [ENTER].**

2 **Press [◀, ▶] to select "Yes" and press [ENTER].**
The settings and lists may be cancelled in the following situations.
–When a title or still picture has been recorded or deleted at the copy source.
–When steps have been taken, for instance, to turn off the unit, remove the card, open the tray, change the copying direction, etc.

Copying all the still pictures on a card –Copy All Pictures (JPEG)

Preparation
Press [DRIVE SELECT] to select the SD drive.

1 **While stopped**
   Press [FUNCTIONS].

2 **Press [▲, ▼] to select "Other Functions" and press [ENTER].**

3 **Press [▲, ▼] to select "Copy all Pictures" and press [ENTER].**

   Copy All Pictures (JPEG)

   Copy from   SD card

   Copy to   DVD

   Copy all pictures (JPEG) in the card.

   ENTER   **Copy   Cancel**
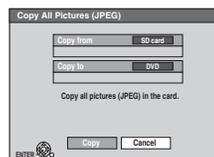
4 **Press [◀, ▶] to select "Copy" and press [ENTER] to start copying.**

To return to the previous screen
Press [RETURN].

To stop copying partway
Press and hold [RETURN] for 3 seconds.

Copying settings

After performing steps 1–3 (➡ page 28, "Copying using the copying list")

Copying Direction	① **Press [▲, ▼] to select "Source" and press [ENTER].** ② **Press [▲, ▼] to select the drive and press [ENTER].** ③ **Press [▲, ▼] to select "Destination" and press [ENTER].** ④ **Press [▲, ▼] to select the drive and press [ENTER].** The same drive as the copying source can be selected. ⑤ **Press [◄] to confirm.**
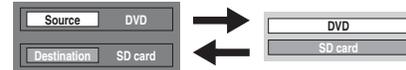
	To register individual still pictures	To register on a folder by folder basis
Create List	① **Press [▲, ▼] to select "New Entry" and press [ENTER].** ② **Press [▲, ▼, ◄, ►] to select a still picture and press [ENTER].** To select another folder (➡ below) ③ **Press [◄] to confirm.**	① **Press [▲, ▼] to select "Picture/Folder" and press [ENTER].** ② **Press [▲, ▼] to select "Folder" and press [ENTER].** ③ **Press [▲, ▼] to select "New Entry" and press [ENTER].** ④ **Press [▲, ▼] to select the folder and press [ENTER].** To switch to the higher folder (➡ below) ⑤ **Press [◄] to confirm.**
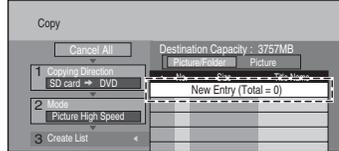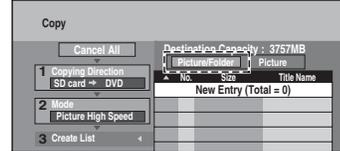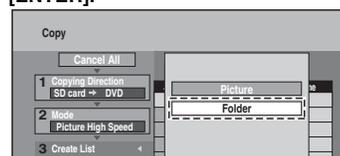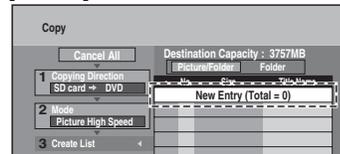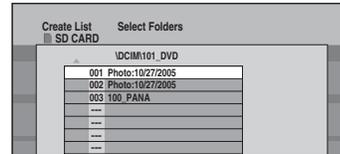
To show other pages
Press [▲, ▼, ◄, ►] to select "Previous" or "Next" and press [ENTER].
●You can also press [◄◄, ►►|] to show other pages.

Multiple registration
Select with [▲, ▼, ◄, ►] and press [❙❙]. (Repeat.)
●A check mark appears. Press [❙❙] again to cancel.

To select another folder
1 Press [▲, ▼, ◄, ►] to select "Folder" and press [ENTER].
  To switch to the higher folder (➡ right)
2 Press [▲, ▼] to select the folder and press [ENTER].
  You can also select folders with the numbered buttons.
    e.g., 5:   [0] ➡ [0] ➡ [5]
         15:   [0] ➡ [1] ➡ [5]
        115:   [1] ➡ [1] ➡ [5]
●The still pictures of different folders cannot be registered on the same list.

To switch to the higher folder
While the Select Folders screen is displayed
1 Press [SUB MENU] and press [ENTER].
2 Press [◄, ►] to select the higher folder and press [ENTER].
  You cannot register a folder with a different higher folder to the same list.
3 Press [▲, ▼] to select the desired folder and press [ENTER].

To edit the copying list

1 Press [▲, ▼] to select the item and press [SUB MENU].
2 Press [▲, ▼] to select the operation and press [ENTER].

Clear All	Clear all items registered on the copying list. **Press [◄, ►] to select "Yes" and press [ENTER].**
Add	Add new items to the copying list. **Press [▲, ▼, ◄, ►] to select the still picture or folder to be added and press [ENTER].**
Remove	Remove the selected items. **Press [◄, ►] to select "Yes" and press [ENTER].**

RQT8655

Copying from a video cassette recorder

THEATER
INPUT
DRIVE SELECT
Numbered buttons
CANCEL ✳
|◀◀ , ▶▶|
DELETE
■
▲ , ▼ , ◀ , ▶
ENTER
FUNCTIONS
■■
SUB MENU
RETURN
A
B
● REC
REC MODE
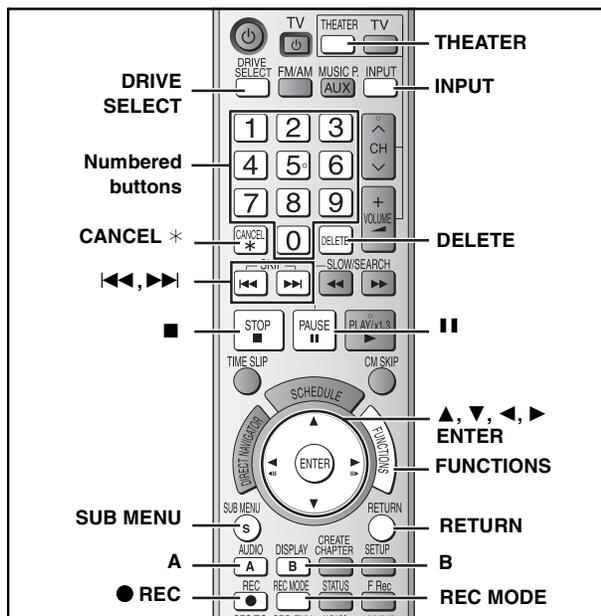
e.g.: Connecting other video equipment to the IN2 or DV IN terminals
You can also connect to the IN1 input terminals on the rear.
≥Turn off the unit and other video equipment before connecting.

This unit

DV IN

S VIDEO   VIDEO   L/MONO – AUDIO – R
IN2

Yellow White Red

or

**DV cable
(IEEE 1394,
4-pin)**

S Video cable*   **Audio/video cable**

Other video equipment
Connect to Audio/video output terminals.
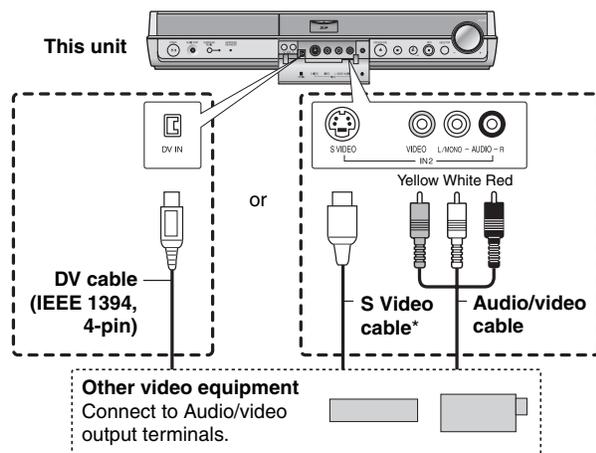
If the audio output of the other equipment is monaural
Connect to L/MONO on the IN2 input terminals at the front.
* The S VIDEO terminal achieves a more vivid picture than the VIDEO terminal.

See also the notes "Important notes for recording"(➡ page 10)

Preparation
≥Turn on the unit and connected equipment.
≥Press [THEATER] to switch the remote control to operate this unit.
≥Press [DRIVE SELECT] to select the DVD drive.
≥Insert a disc (➡ page 12).
≥Press [REC MODE] to select the recording time.
≥To reduce noise in input from the video cassette recorder, set "Line-in NR" to "On" (➡ page 21).
≥**When recording from the unit's DV IN terminal**
Select the type of audio recording from "Select Audio Channel For DV Input" in the Setup menu (➡ page 39).
When recording from DV equipment (e.g., digital video camcorder), you can record audio/video recordings from DV tape only.

DV camcorder recording (DV Camcorder Rec.)

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

`RAM` Programs are recorded as a title while at the same time chapters are created at each break in the images and the playlist is created automatically.

When "DV camcorder connection" screen is displayed

DV camcorder connection
DV connection detected.
Start recording ?
Record to DVD   Cancel
ENTER

**Press [◀, ▶] to select "Record to DVD" and press [ENTER].
You can proceed to step 4.**

---

1   While stopped
Press [FUNCTIONS].

2   **Press [▲, ▼] to select "Other Functions" and press [ENTER].**

3   **Press [▲, ▼] to select "DV Camcorder Rec." and press [ENTER].**

4   **Press [◀, ▶] to select "Record" and press [ENTER].**
Recording starts.

When recording finishes
The confirmation screen appears. Press [ENTER] to finish DV camcorder recording.

To stop recording
Press [■]. The confirmation screen appears. Press [ENTER].

Note
≥Only one piece of DV equipment (e.g., digital video camcorder) can be connected to the unit via the DV IN terminal.
≥If you use video camcorders from other manufacturers these are not guaranteed to work.
≥It is not possible to operate the unit from the connected DV equipment.
≥The DV IN terminal on this unit is for use with DV equipment only. (It cannot be connected to a computer, etc.)
≥The DV equipment name may not be shown correctly.
≥Depending on the DV equipment, the images or audio may not be input properly.
≥The date and time information on the tape in the DV equipment will not be recorded.
≥You cannot record and play simultaneously.

If the DV camcorder recording function does not work properly, check the connections and DV equipment settings, and turn the unit off and back on.
If that does not work, follow the instructions for manual recording (➡ below).

Manual recording

`RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW`

Note
When recording using this unit's input terminals, only the sound received at the time of recording will be recorded.
As long as the secondary audio that is recorded on the video cassette is not output on the unit in play, it is not recorded.

1   While stopped
Press [INPUT] to select the input channel for the equipment you have connected.
e.g., If you have connected to IN2 input terminals, select "IN2".

2   **Start play on the other equipment.**

3   When you want to start recording
Press [● REC].
Recording starts.

≥Using Flexible Recording (➡ page 13), you can record the content of a video cassette (approx. 1–8 hours) to a 4.7 GB disc with the best possible quality of recording without wasting disc space.
To skip unwanted parts
Press [■■] to pause recording. (Press again to restart recording.)

To stop recording
Press [■].

Almost all videos and DVD software on sale have been treated to prevent illegal copying. Any software that has been so treated cannot be recorded using this unit.

Entering text

`RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW` `SD`
You can give names to recorded titles, etc.
The maximum number of characters:

`RAM`	Characters
Title	64 (44*)
Playlist	64
Album of still pictures	36
Disc	64

* Scheduled recording

`-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW`	Characters
Title	44
Disc	40

`SD`	Characters
Album of still pictures	36

If a name is long, parts of it may not be shown in some screens.

1 Show Enter Name screen.

Title (scheduled recording)	(➡ page 14, step 3)
Title	(➡ page 22, step 3)
Playlist	(➡ page 25, step 5)
Disc	(➡ page 32, "Providing a disc with a name")
Album of still pictures	(➡ page 26, step 3)

`-R` `-R DL` `-RW(V)` `+R` `+R DL`
If you enter a long name, only part of it is shown in the Top Menu after finalization (➡ page 33). When entering a title name, the name that will appear in the Top Menu can be previewed in "Top Menu Preview (Finalized Disc)" window.

Name field: shows the text you have entered.
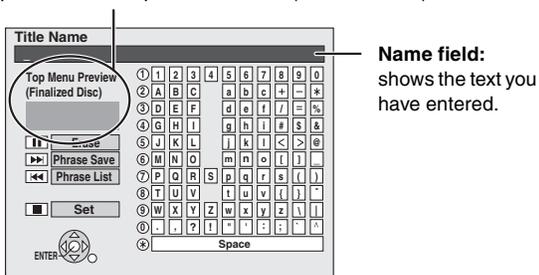
2 Press [▲, ▼, ◄, ►] to select a character and press [ENTER].
Repeat this step to enter other characters.
- **To erase a character**
  Press [▲, ▼, ◄, ►] to select the character in the name field and press [‖].
- **Using the numbered buttons to enter characters**
  e.g., entering the letter "R"
  ① **Press [7] to move to the 7th row.**
  ② **Press [7] twice to highlight "R".**
  ③ **Press [ENTER].**
- **To enter a space**
  Press [CANCEL ✳] and press [ENTER].
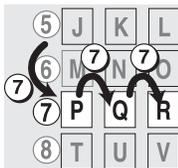
3 Press [■] (Set).
Returns to the previously displayed screen.

To end partway
Press [RETURN]. (Text is not saved.)

■ To save frequently used phrases
You can add frequently used phrases and recall them later.
Maximum number of saved phrases: 20
Maximum number of characters per phrase: 20
After entering the phrase (➡ above, steps 1–2)
1 Press [►►|] while the phrase to be saved is shown in the name field.
2 Press [◄] to select "Save" and press [ENTER].
To cancel saving phrase
Press [RETURN].
■ To recall a saved phrase
1 Press [|◄◄].
2 Press [▲, ▼, ◄, ►] to select the phrase to be recalled and press [ENTER].
■ To erase a saved phrase
1 Press [|◄◄].
2 Press [▲, ▼, ◄, ►] to select the phrase to be deleted and press [SUB MENU].
3 Press [ENTER].
4 Press [◄] to select "Erase" and press [ENTER].
5 Press [RETURN].

Delete Navigator

`RAM` `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW` `SD`
(You cannot delete items on finalized discs.)
- **A title or a still picture cannot be restored once it is deleted.**
  Make certain before proceeding.
- You cannot delete while recording or copying.
- `RAM` `SD` If you delete a recorded title (or a still picture), the space deleted becomes available for recording.
- `-RW(V)` `+RW` Disc space increases only when the last recorded title is deleted.
- `-R` `-R DL` `+R` `+R DL` Available space does not increase after deletion.

Preparation
- Press [THEATER] to switch the remote control to operate this unit.
- Press [DRIVE SELECT] to select the DVD or SD drive.
- `RAM` `SD` Release protection (➡ page 32).

1 While stopped
Press [FUNCTIONS].

2 Press [▲, ▼] to select "Delete" and press [ENTER].

`RAM` **To switch to the other view**
Press [B] to select Album View.
Press [A] to select Title View.

3 Deleting a title:
Press [▲, ▼, ◄, ►] to select the title and press [ENTER].

Deleting an album:
Press [▲, ▼, ◄, ►] to select the album and press [DELETE].

Deleting a still picture:
① **Press [▲, ▼, ◄, ►] to select the album which contains the still picture to delete and press [ENTER].**
② **Press [▲, ▼, ◄, ►] to select the still picture and press [ENTER].**

You can confirm the titles or pictures etc. that you have selected using the sub menu.
- Refer to sub menu operations for the "Title View" (➡ page 22, step 3).
- Refer to sub menu operations for the "Picture View" or "Album View" (➡ page 26, step 3).

To show other pages
Press [▲, ▼, ◄, ►] to select "Previous" or "Next" and press [ENTER].
- You can also press [|◄◄, ►►|] to show other pages.
Multiple deleting
Select with [▲, ▼, ◄, ►] and press [‖]. (Repeat.)
- A check mark appears. Press [‖] again to cancel.

4 Press [◄] to select "Delete" and press [ENTER].
The title, the album or the still picture is deleted.

To return to the previous screen
Press [RETURN].

To exit the screen
Press [RETURN] several times.

Deleting a title or a still picture during play

1 While playing
Press [DELETE].
You cannot delete a still picture during a slideshow.

2 Press [◄, ►] to select "Delete" and press [ENTER].
The title or the picture is deleted.
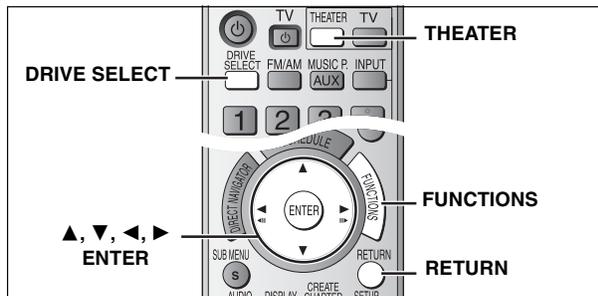
DVD and Card Management

Preparation
- Press [THEATER] to switch the remote control to operate this unit.
- Press [DRIVE SELECT] to select the DVD or SD drive.
- Insert a disc (➡ page 12) or card (➡ page 8).
- **RAM** **SD** Release protection. (➡ below)

1 While stopped

Press [FUNCTIONS].

2 **Press [▲, ▼] to select "Other Functions" and press [ENTER].**

3 **Press [▲, ▼] to select "DVD Management" or "Card Management" and press [ENTER].**

Select which step 4 to perform depending on what you want to do next.

To return to the previous screen
Press [RETURN].

To exit the screen
Press [RETURN] several times.

Providing a disc with a name –Disc Name

RAM **-R** **-R DL** **-RW(V)** **+R** **+R DL** **+RW**
After performing steps 1–3 (➡ above)

4 **Press [▲, ▼] to select "Disc Name" and press [ENTER].**

➡ page 31, Entering text
- The disc name is displayed in the DVD MANAGEMENT window.
- **-R** **-R DL** **-RW(V)** **+R** **+R DL** With a finalized discs the name is displayed on the Top Menu.
- **+RW** The disc name is displayed only if you play the disc on other equipment.

Setting the protection–Disc Protection

RAM
After performing steps 1–3 (➡ above)

4 **Press [▲, ▼] to select "Disc Protection" and press [ENTER].**

5 **Press [◄, ►] to select "Yes" and press [ENTER].**

The lock symbol appears closed when the disc is write-protected.

Cartridge-protection

RAM (with a cartridge)
With the write-protect tab in the protect position, play automatically starts when inserted in the unit.

SD
Switch the write-protect switch to the "LOCK" position.

Deleting all titles and playlists –Delete All Titles

RAM
After performing steps 1–3 (➡ left)

4 **Press [▲, ▼] to select "Delete All Titles" and press [ENTER].**

5 **Press [◄, ►] to select "Yes" and press [ENTER].**

6 **Press [◄, ►] to select "Start" and press [ENTER].**
A message appears when finished.

7 **Press [ENTER].**

Note
- **Once deleted, the recorded contents are lost and cannot be restored.** Make certain before proceeding.
- Deleting all video titles will result in all playlists also being deleted.
- Still picture data (JPEG, TIFF) or computer data cannot be deleted.
- Delete does not work if one or more titles are protected.

Deleting all contents of a disc or card –Format

RAM **-RW(V)** **+RW** **-RW(VR)** **SD**
+R **+R DL** (New disc only)

Note
Formatting deletes all contents (including computer data), and they cannot be restored. Check carefully before proceeding. The contents are deleted when you format the disc or card even if you have set protection.

After performing steps 1–3 (➡ left)

4 **Press [▲, ▼] to select "Format Disc (DVD)" or "Format memory card" and press [ENTER].**

5 **Press [◄, ►] to select "Yes" and press [ENTER].**

6 **Press [◄, ►] to select "Start" and press [ENTER].**
A message appears when formatting is finished.
Note
- **Do not disconnect the AC power supply cord while formatting.** This can render the disc or card unusable.
- Formatting normally takes a few minutes. However, it may take up to a maximum of 70 minutes (**RAM**).

7 **Press [ENTER].**

Note
- **-R** **-R DL** **CD** Formatting cannot be performed.
- **-RW(V)** **-RW(VR)** You can format only as DVD-Video format on this unit.
- When a disc or card has been formatted using this unit, it may not be possible to use it on any other equipment.

RAM **To stop formatting**
Press [RETURN].
- You can cancel formatting if it takes more than 2 minutes. The disc must be reformatted if you do this.

Selecting whether to show the Top Menu first–Playback will start with:

`-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW`

You can select whether to show the top menu after finalizing. Make selections before finalizing the disc.

After performing steps 1–3 (➡ page 32)

4 Press [▲, ▼] to select "Playback will start with:" and press [ENTER].

5 Press [▲, ▼] to select the item and press [ENTER].

DVD's Top Menu: The top menu appears first.
First Title on DVD: The disc content is played without displaying the top menu.

Enabling discs to be played on other equipment–Finalize

`-R` `-R DL` `-RW(V)` `+R` `+R DL`

Finalize the disc so you can play it on other DVD equipment. The equipment must be able to play finalized discs. To check compatibility with other equipment, refer to page 6.
Make selection from "Playback will start with:" (➡ above) before finalizing the disc.

After performing steps 1–3 (➡ page 32)

4 Press [▲, ▼] to select "Finalize" and press [ENTER].

5 Press [◀, ▶] to select "Yes" and press [ENTER].

6 Press [◀, ▶] to select "Start" and press [ENTER].

≥Finalizing starts. You cannot cancel finalizing.
≥Finalizing can take a few minutes, up to a maximum of 15 minutes, depending on the remaining space on the disc. (`-R DL` `+R DL` up to 60 minutes.)

Note
Do not disconnect the AC power supply cord while finalizing. This will render the disc unusable.

7 Press [ENTER].

After finalizing
≥`-R` `-R DL` `+R` `+R DL` The disc becomes play-only and you can no longer record or edit.
≥`-RW(V)` **You can record and edit the disc after formatting (➡ page 32) although it becomes play-only after finalizing.**
≥Titles are divided into about 5-minute (`+R` `+R DL` 8-minute) chapters. This time varies greatly depending on the condition and mode of recording.
≥There is a pause of several seconds between titles and chapters during play.

≥You cannot finalize discs recorded on other manufacturers' equipment.
≥Discs finalized on this unit may not be playable on other players due to the condition of the recording.
≥When finalizing a high-speed recording compatible disc, it may take longer than displayed on the confirmation screen (approximately four times).

DVD and Card Management

Creating Top Menu –Create DVD Top Menu

`+RW`

+RW discs contain no Top Menu data. Top Menu is a convenient function. We recommend you create the menu before playing a +RW disc on other equipment.
Make selection from "Playback will start with:" (➡ left) before creating Top Menu.
≥You cannot use the Top Menu for playing on this unit.

After performing steps 1–3 (➡ page 32)

4 Press [▲, ▼] select "Create DVD Top Menu" and press [ENTER].

5 Press [◀, ▶] to select "Yes" and press [ENTER].

6 Press [◀, ▶] to select "Start" and press [ENTER].

Creating Top Menu starts. You cannot cancel creating.
Creating Top Menu can take a few minutes.

7 Press [ENTER].

≥Recording or editing on the disc may delete the menu. In that case, create the menu again.

Enabling the second layer on DL (dual- or double-layer on single side) discs to be recordable–Close First Layer

`-R DL` `+R DL`

DVD-R DL and +R DL discs have two layers of recording surface on one side. This unit does not offer seamless recording on two layers. Recording stops when space on the first layer becomes full. You must close the first layer to start recording on the second layer. Closing makes the first layer unavailable for recording (editing is still available). You cannot cancel closing. Make certain before proceeding.

After performing steps 1–3 (➡ page 32)

4 Press [▲, ▼] to select "Close First Layer" and press [ENTER].

5 Press [◀, ▶] to select "Yes" and press [ENTER].

6 Press [◀, ▶] to select "Start" and press [ENTER].

Closing the layer starts. You cannot cancel closing.
Closing the layer can take several minutes, up to a maximum of 30 minutes, depending on the remaining space on the first layer.

Note
≥**Do not disconnect the AC power supply cord while closing the layer.** This will render the disc unusable.

7 Press [ENTER].

≥You cannot close the first layer when it has no recording.
≥By closing the layer, you can record or edit discs that have been recorded on the second layer by other equipment.

■ **To confirm the layer you can record**
You can confirm the remaining recording time on the layer you can record.

RQT8655

The radio

∧ ∨ CH

SURROUND MUSIC   ■ + − **VOLUME**

FM/AM   **THEATER**

Numbered buttons   ∧ ∨ **CH**

                                        + − **VOLUME**

◀◀, ▶▶

▲, ▼, ◀, ▶

ENTER

SRD ENH

SFC/EQ   **H.BASS**

C. FOCUS, FM MODE

SRD MUSIC
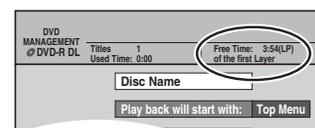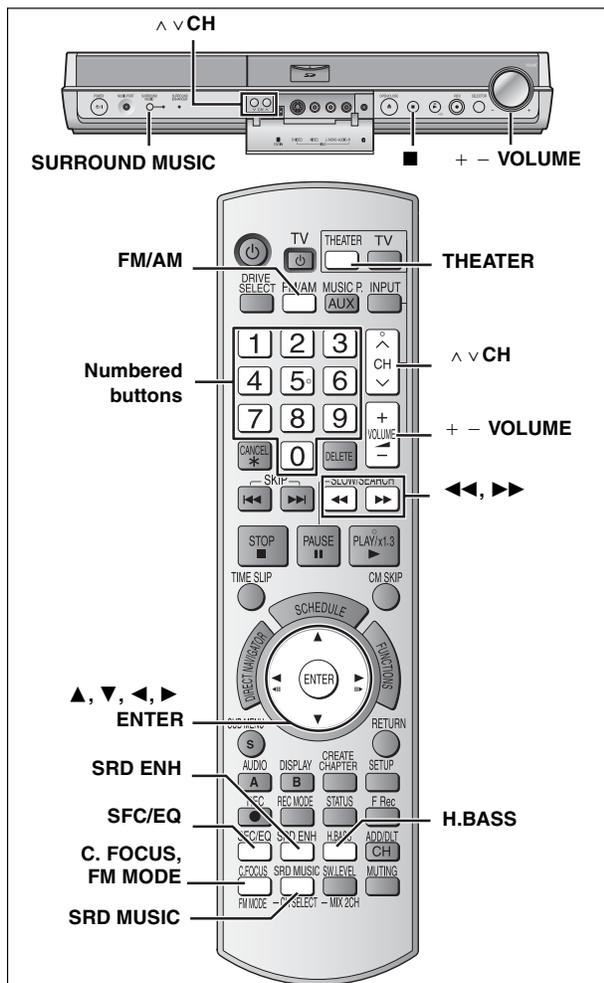
Preparation
≥Turn off TV while using radio since noise may occur.
≥Press [THEATER] to switch the remote control to operate this unit.

Manual tuning

1 **Press [FM/AM] to select the "FM" or "AM".**

2 **Press [◀◀] or [▶▶] to select the frequency of the required station.**

TUNED: Displayed when a radio station is tuned.
ST: Displayed when a stereo FM broadcast is being received.

Press and hold [◀◀] or [▶▶] until the frequency starts scrolling to start automatic tuning. Tuning stops when a station is found.

3 **Adjust the volume with [+ − VOLUME].**

∎ If noise is excessive
Press [FM MODE].
Each time you press the button:
FM: Changes between stereo and forced monaural.
AM: BP1→ BP2→ BP3→ BP4 (BP=Beat Proof)

Select between BP1 and BP4 that receives good reception.
The FM mode is cancelled when you change the frequency.

∎ FM frequency step
The step is factory-set to 0.2 MHz, but you can change it to receive broadcasts allocated 0.1-MHz steps.
1 Press [FM/AM] to select "FM".
2 Press and hold [■] on the main unit.
After a few seconds the display changes to show the current minimum frequency. Continue to hold the button down. The minimum frequency changes and the step is changed.
To return to the original step, repeat the above steps.

Note
Any FM/AM frequencies preset in channels will be changed by this procedure. Preset them again.

RQT8655

34

Preset tuning

Preset channels to make selection simple.
Up to 30 stations can each be set in the FM and AM bands.

Automatic presetting

1 **Press [FM/AM] to select the "FM" or "AM".**

2 **Press [◀◀] or [▶▶] to tune to the lowest frequency.**
FM: 87.9 MHz or 87.5 MHz
AM: 520 kHz

3 **Press and hold [ENTER].**
Release the button when "AUTO FM" or "AUTO AM" is lit on the display.

The tuner presets all the stations it can receive into the channels in ascending order.
≥"SET OK" is displayed when the stations are set. The last station to be set is then played.

≥The unit of display is MHz for FM radio and kHz for AM radio when the selector is in FM/AM mode.
≥**"ERROR" is displayed**
Presetting was unsuccessful. Preset manually.

Manual presetting

1 **Tune to the station (➡ left).**

2 **Press [ENTER].**

3 While "MEMO" is flashing on the display
Press the numbered buttons or [∧ ∨ CH] to select a channel and press [ENTER].

e.g., "2": [0] ➡ [2]
"12": [1] ➡ [2]

The station occupying a channel is erased if another station is preset in that channel.

Selecting channels

1 **Press [FM/AM] to select "FM" or "AM".**

2 **Press the numbered buttons or [∧ ∨ CH] to select the channel.**

e.g., "2": [0] ➡ [2]
"12": [1] ➡ [2]

Note
If there is nearby electrical interference during auto tuning the frequency may come to a halt without locating a channel. Turn off the power of the nearby electrical equipment.

∎ Use FM outdoor antenna if radio reception is poor.
≥Disconnect the FM indoor antenna.
≥The antenna should be installed by a competent technician.

Note
≥Disconnect the outdoor antenna when the unit is not in use.
≥Do not use the outdoor antenna during an electrical storm.

FM outdoor antenna (Using a television antenna)

75 Ω coaxial cable (not included)

Back of the main unit

Antenna plug (not included)

Sound effect
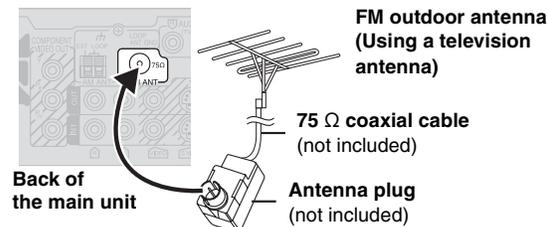
The factory settings for the "H. Bass" (➥ below) and Subwoofer levels (➥ page 36) are optimized for 5.1 channel movie playback. If the bass seems too heavy during 2-channel disc playback, etc. change the settings.

Changing the sound quality

Sound Field Control (SFC) Available with: ●**2-channel sound**	Using the built-in sound quality settings, you can create a 5.1 channel effect while using 2-channel audio. This does not work with multi-channel audio. **Press [SFC/EQ] several times to select the desired setting.** Each time you press the button: **FLAT ⟶ MOVIE ⟶ SPORTS ⟶ MUSIC** 　⬑──── Equalizer (EQ) setting (➥ below) ⟵──┘ **FLAT**: Cancel (no effect is added). **MOVIE**: Use this mode when playing movie software. **SPORTS**: Simulates sound to make you feel like you are at sports event. **MUSIC**: Adds surround effects to stereo source. ●We don't recommend this setting when listening to AM radio broadcasts. ●This is ineffective with monaural audio. ●To check the current setting, press [SFC/EQ].
Equalizer (EQ) Available with: ●**Multi-channel sound** ●**2-channel or monaural sound**	Using the built-in sound quality settings, you can change the tone of the front 2 channels. **Press [SFC/EQ] several times to select the desired setting.** Each time you press the button: **FLAT ⟶ Sound Field Control (SFC) setting* (➥ above)** 　⬑── **MANUAL** ⟵ **SOFT** ⟵ **CLEAR** ⟵ **HEAVY** ⟵──┘ *Not displayed during multi-channel audio playback. **FLAT**: Cancel (no effect is added). **HEAVY**: Adds punch to rock. **CLEAR**: Clarifies higher sounds. **SOFT**: For background music. **MANUAL**: Adjust the bass and treble with manual equalizer. 　　　BASS: Press [◀]⟶[▲ ▼] −6 to +6 (in 2 units) 　　　TREBLE: Press [▶]⟶[▲ ▼] −6 to +6 (in 2 units) ●To check the current setting, press [SFC/EQ]. ●The set level for "BASS" and "TREBLE" remains intact. (Even after the unit is turned off.)
Center Focus Available with: ●**Multi-channel sound** (Discs where the dialogue is recorded in the center channel)	You can make the sound of the center speaker seem like it is coming from within the television. **Press [C.FOCUS].** Each time you press the button: CENTER FOCUS ON⟷CENTER FOCUS OFF ●This cannot be set while "Surround Music" or "Surround Enhancer" (➥ below) is set to "ON" ("ERROR" is displayed in the display window). Please set this once "Surround Music" or "Surround Enhancer" is set to "OFF".
Enhancing the bass sound–H.Bass Available with: ●**Multi-channel sound** ●**2-channel or monaural sound**	You can enhance low-frequency sound so that heavy bass sound can be heard clearly, even if the acoustics of your room are not optimal. **Press [H.BASS].** Each time you press the button: H.BASS ON (factory preset)⟷H.BASS OFF ●The setting you make is retained.
Equalizing the sound –Surround Music Available with: ●**Multi-channel sound** ●**2-channel or monaural sound**	After mixing the audio on all channels, all speakers will output the same audio (monaural). We recommend this setting for house parties. No matter which speaker the guests are next to, the audio level will be the same. **Press [SRD MUSIC].** Main unit: Press [SURROUND MUSIC]. Each time you press the button: SURROUND MUSIC ON⟷SURROUND MUSIC OFF Lights up
Enhancing surround sound–Surround Enhancer Available with: ●**Multi-channel sound** ●**2-channel or monaural sound**	Automatically adjusts each speaker to enhance the surround sound effect of multi-channel audio. When playing two-channel audio, the audio of the L/R front speakers is also output through the L/R surround speakers (audio is not output from the center speaker) and creates a surround sound effect. **Press [SRD ENH].** Each time you press the button: SRD ENHANCER ON⟷SRD ENHANCER OFF ●This cannot be set while "Surround Music" is set to "ON" ("ERROR" is displayed in the display window). Please set this once Surround Music is set to "OFF". Lights up
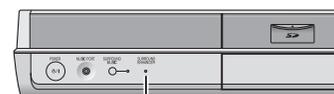
Note
●When "R MUSICP" is selected, only "Equalizer (EQ)" and "H. Bass" can be set. When headphones are in use, only "Equalizer (EQ)" and "Surround Music" can be set. (➥ page 41)
●You may experience a reduction in sound quality when these sound effects are used with some sources. If this occurs, turn the sound effects off.

RQT8655

DRIVE SELECT

▲, ▼, ◄, ►
ENTER

CH SELECT

SW.LEVEL,
MIX 2CH

MUTING
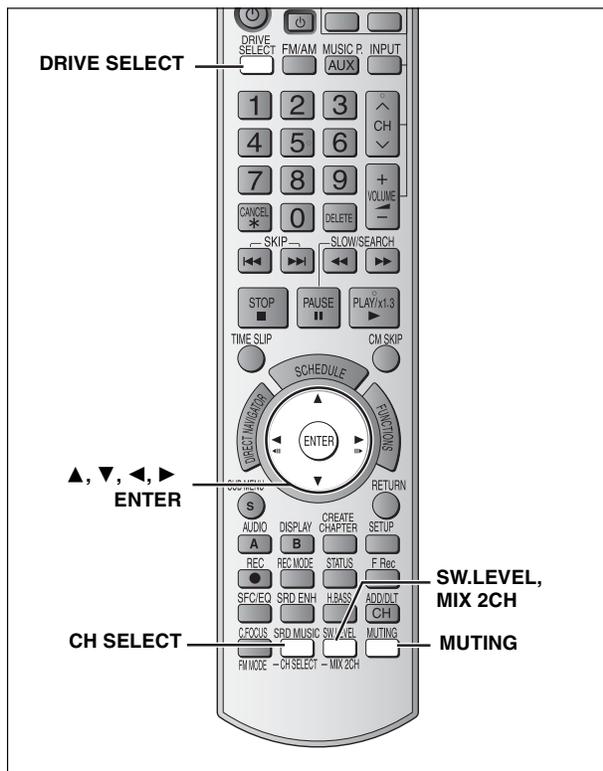
Dolby Digital and DTS

≥Dolby Digital and DTS are digital encoding systems used on DVD to carry surround sound. Both were originally developed for use in cinemas.
≥This unit automatically recognizes and decodes these systems.

Software encoded with Dolby Digital can be identified with this mark.	Software encoded with DTS can be identified with this mark.
DOLBY DIGITAL	**dts** SURROUND

Play a Dolby Digital or DTS source.
The Dolby Digital or DTS indicator lights.

■ To down-mix Dolby Digital or DTS (multiple-channel) signals to 2 channels
Press and hold [MIX 2CH].

≥To cancel, press and hold [MIX 2CH] again.
≥This cannot be set while "Surround Music" or "Surround Enhancer" (➡ page 35) is set to "ON" ("ERROR" is displayed in the display window). Please set this once "Surround Music" or "Surround Enhancer" is set to "OFF".

When "D.MIX" flashes on the display DVD-A
The DVD-Audio contains multiple-channel signals that cannot be down-mixed.

Muting the sound

Press [MUTING].
"MUTING" flashes on the unit's display.

To cancel
≥Press [MUTING] again or reduce the volume to minimum "VOL 0", then raise it to the required level.
≥Muting is cancelled when you switch the unit to standby.

Adjusting the subwoofer level

Press [SW.LEVEL].

Each time you press the button:
SUB WOOFER 1→SUB WOOFER 2→SUB WOOFER 3
↑————SUB WOOFER 4 (factory preset)————┘

≥The setting you make is retained.
≥This cannot be set when headphones are connected.

Speaker level adjustments

Adjust the level of the speakers so they are the same apparent level as the front speakers where you would normally be sitting and listening.

Preparation
≥Press [DRIVE SELECT] to select the DVD drive.
≥Turn off the other sound effects.
≥This cannot be set while "Surround Music" (➡ page 35) is set to "ON" ("ERROR" is displayed in the display window). Please set this once Surround Music is set to "OFF".

> **When stopped or playing discs with 2 channel or monaural audio**

You can adjust the balance of the front speakers.
≥You can also adjust the L/R Surround speakers while "Sound Field Control (SFC)" or "Surround Enhancer" is set to on. Please perform the following "When playing Multi-channel discs" operations.

1 Press and hold [CH SELECT].

2 Press [◄, ►] to adjust the "L", "R" balance.

> **When playing Multi-channel discs**

1 Press and hold [CH SELECT].

2 While the screen above is being displayed
Press [CH SELECT] to select the speaker.
L, R→Cch→RSch→LSch→SWch
↑————————————————————┘

SW: Subwoofer
≥You can only adjust SW if there is output from the subwoofer channel.

3 Press [▲] (to increase) or [▼] (to decrease).
L, R: Press [◄, ►] to adjust the "L", "R" balance.
C, RS, LS: −6 dB to +6 dB
SW: −6 dB to +6 dB

Changing the unit's settings

DRIVE SELECT

Numbered buttons

▲, ▼, ◄, ►
ENTER

THEATER

RETURN
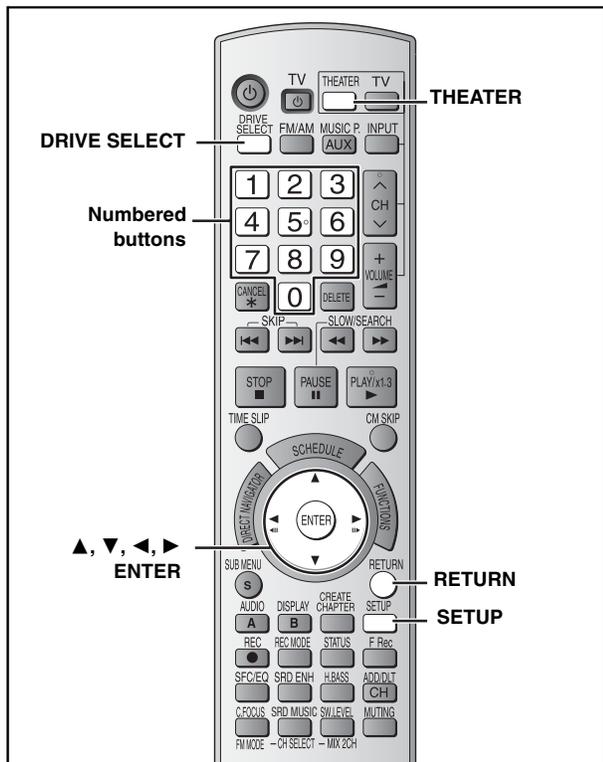
SETUP

Common procedures

Preparation
●Press [THEATER] to switch the remote control to operate this unit.
●Press [DRIVE SELECT] to select the DVD or SD drive.

1 While stopped

Press [SETUP].

Tabs   Menus   Options

Setup	Signal Source (RF IN)	Cable TV
Channel	Set Channels Automatically	
Setup	Channel Captions	
Disc	Preset Channel Captions	
	Manual Channel Captions	

2 Press [▲, ▼] to select the tab and press [►].

3 Press [▲, ▼] to select the menu and press [ENTER].

4 Press [▲, ▼] to select the option and press [ENTER].

To return to the previous screen
Press [RETURN].

To exit the screen
Press [SETUP].

[Note]
There may be differences in operation methods. If this happens, follow the on-screen instructions for the operation.

Sound effect / Changing the unit's settings

Summary of settings

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

Tabs	Menus	Options (Underlined items are the factory presets.)
Channel	**Signal Source (RF IN)** (Setup Guide ➡ page 13)	●Antenna ●<u>CableTV</u>
	Set Channels Automatically (Setup Guide ➡ page 13)	–
	Preset Channel Captions*1 (Setup Guide ➡ page 14)	–
	Manual Channel Captions*1 (Setup Guide ➡ page 14)	–
Setup	**Off Timer** Select how long the unit remains on when it is not being used. ●This has no effect when "FM", "AM", "AUX", "F MUSICP", or "R MUSICP" is selected as the source.	●2 Hours ●<u>6 Hours</u> ●Off
	Remote Control Code (Setup Guide ➡ page 15)	●<u>Set Code 1</u> ●Set Code 2 ●Set Code 3
	Clock Settings Press [ENTER] to show the following settings.	
	Set Clock Automatically (Setup Guide ➡ page 13)	–
	Set Clock Manually (Setup Guide ➡ page 15)	–
	Adjust Time Zone*2 (Setup Guide ➡ page 15)	●−1 ●<u>0</u> ●+1
	Quick Start If you set Quick Start to on, you can start recording to DVD-RAM about 1 second after you press [⏻] to turn the unit on and then sequentially press [● REC].	●On ●<u>Off</u> The following happens when you have selected "On". ●Power consumption in standby mode increases because power is supplied to the unit.
	Restore Default Settings This returns all values in the Setup menus, except for the clock, channel settings, ratings level, and on-screen language, to the default settings.	●Yes ●<u>No</u>

*1 You can set these menus only after "Set Channels Automatically" is completed.
*2 You can set this menu only after "Set Clock Automatically" is completed.

Tabs	Menus	Options (Underlined items are the factory presets.)
Disc	**Settings for Playback** Press [ENTER] to show the following settings.	
	Ratings Set a ratings level to limit DVD-Video play. Follow the on-screen instructions. Enter a 4-digit password with the numbered buttons when the password screen is shown. ●Do not forget your password.	●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. ●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): The setting returns to "Audio Mode (Video Off)" when you change the disc or turn the unit off. ●Audio Mode (Video Off)
	Audio Language DVD-V	●Some discs start in a certain language despite any changes you make here. ●Enter a code (➡ below) with the numbered buttons when you select "Other ✳✳✳✳". When the selected language is not available on the disc, the default language is played. There are discs where you can only switch the language from the menu screen (➡ page 16).	●English ●French ●Spanish ●Original: The original language of each disc will be selected. ●Other ✳✳✳✳
	Subtitle Language DVD-V		●Automatic: If the language selected for "Audio Language" is not available, subtitles of that language will automatically appear if available on that disc. ●English ●French ●Spanish ●Other ✳✳✳✳
	Menu Language DVD-V		●English ●French ●Spanish ●Other ✳✳✳✳
	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 (➡ page 11, Recording modes and approximate recording times).	●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. The sound quality is better when using "EP – Extended Play (6H)" than when using "EP – Extended Play (8H)".
Video	**Still Mode (paused video)** Select the type of picture shown when you pause play (➡ page 49, Frames and fields).	●Automatic ●Field: Select if jittering occurs when "Automatic" is selected. (The picture is coarser.) ●Frame: Select if small text or fine patterns cannot be seen clearly when "Automatic" is selected. (The picture is clearer and finer.)
	Black Level Control Select for adjusting 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/S Video) 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/P_B/P_R) terminals.	●Lighter ●Normal ●Darker

Language code list Enter the code with the numbered buttons.

Abkhazian: 6566	Chinese: 9072	Hebrew: 7387	Macedonian: 7775	Romanian: 8279	Telugu: 8469
Afar: 6565	Corsican: 6779	Hindi: 7273	Malagasy: 7771	Russian: 8285	Thai: 8472
Afrikaans: 6570	Croatian: 7282	Hungarian: 7285	Malay: 7783	Samoan: 8377	Tibetan: 6679
Albanian: 8381	Czech: 6783	Icelandic: 7383	Malayalam: 7776	Sanskrit: 8365	Tigrinya: 8473
Ameharic: 6577	Danish: 6865	Indonesian: 7378	Maltese: 7784	Scots Gaelic: 7168	Tonga: 8479
Arabic: 6582	Dutch: 7876	Interlingua: 7365	Maori: 7773	Serbian: 8382	Turkish: 8482
Armenian: 7289	English: 6978	Irish: 7165	Marathi: 7782	Serbo-Croatian:	Turkmen: 8475
Assamese: 6583	Esperanto: 6979	Italian: 7384	Moldavian: 7779	8372	Twi: 8487
Aymara: 6589	Estonian: 6984	Japanese: 7465	Mongolian: 7778	Shona: 8378	Ukrainian: 8575
Azerbaijani: 6590	Faroese: 7079	Javanese: 7487	Nauru: 7865	Sindhi: 8368	Urdu: 8582
Bashkir: 6665	Fiji: 7074	Kannada: 7578	Nepali: 7869	Singhalese: 8373	Uzbek: 8590
Basque: 6985	Finnish: 7073	Kashmiri: 7583	Norwegian: 7879	Slovak: 8375	Vietnamese: 8673
Bengali; Bangla:	French: 7082	Kazakh: 7575	Oriya: 7982	Slovenian: 8376	Volapuk: 8679
6678	Frisian: 7089	Kirghiz: 7589	Pashto, Pushto:	Somali: 8379	Welsh: 6789
Bhutani: 6890	Galician: 7176	Korean: 7579	8083	Spanish: 6983	Wolof: 8779
Bihari: 6672	Georgian: 7565	Kurdish: 7585	Persian: 7065	Sundanese: 8385	Xhosa: 8872
Breton: 6682	German: 6869	Laotian: 7679	Polish: 8076	Swahili: 8387	Yiddish: 7473
Bulgarian: 6671	Greek: 6976	Latin: 7665	Portuguese: 8084	Swedish: 8386	Yoruba: 8979
Burmese: 7789	Greenlandic: 7576	Latvian, Lettish:	Punjabi: 8065	Tagalog: 8476	Zulu: 9085
Byelorussian: 6669	Guarani: 7178	7686	Quechua: 8185	Tajik: 8471	
Cambodian: 7577	Gujarati: 7185	Lingala: 7678	Rhaeto-Romance:	Tamil: 8465	
Catalan: 6765	Hausa: 7265	Lithuanian: 7684	8277	Tatar: 8484	

Tabs	Menus	Options (Underlined items are the factory presets.)
Audio	**Dynamic Range Compression** `DVD-V` **(Dolby Digital only)** Change the dynamic range for late night viewing.	●On ●<u>Off</u>
	Multi-channel TV Sound (MTS) `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW` Select whether to record the main or secondary audio program (SAP) when recording to a disc.	●<u>Main</u> ●Secondary Audio Program (SAP) You cannot select the audio on this unit when recording from an external source, such as when copying from a video cassette recorder. Select on the other equipment. When recording from the unit's DV IN terminal, select the type of audio recording from "Select Audio Channel For DV Input" (➡ below).
	Select Audio Channel For DV Input You can select the kind of audio when recording from the unit's DV IN terminal (➡ page 30).	●<u>Stereo 1</u>: Records audio (L1, R1) ●Stereo 2: Records added audio such as narration (L2, R2) subsequent to original recording. ●Mix: Records both Stereo 1 and Stereo 2. `-R` `-R DL` `-RW(V)` `+R` `+R DL` `+RW` When recording MTS broadcast, select the type of audio in advance from "Multi-channel TV Sound (MTS)" (➡ above).
	Speaker (➡ page 40) Adjust the speaker level or set the delay time for your center and surround speakers.	**Delay time** ●Center: <u>0.0</u>/1.0/2.0/3.0/4.0/5.0 ms ●Surround (L/R): 0.0/<u>5.0</u>/10.0/15.0 ms **Speaker level** ●Center: –6 dB to +6 dB ●Surround (L/R): –6 dB to +6 dB
Display	**Status Messages** Choose whether to show status messages automatically.	●<u>Automatic</u> ●Off
	On-screen Language Choose the language for these menus and on-screen messages.	●<u>English</u> ●Español ●Français
	Blue Background Select "Off" if you do not want to have the unit show the blue background when reception is weak.	●<u>On</u> ●Off
	FL Display Changes the brightness of the unit's display.	●<u>Bright</u> ●Dim ●Automatic: The display turns dark during play, and reappears momentarily if a button is pressed. When the unit is turned off all displays disappear. While using this mode the standby power consumption can be reduced.
TV Screen	**TV Type** (Setup Guide ➡ page 14)	●<u>Aspect 4:3 & 480i</u> ●Aspect 4:3 & 480p ●Aspect 16:9 & 480i ●Aspect 16:9 & 480p
	Functions of HDMI Press [ENTER] to display the menu.	
	HDMI Video Output	●<u>On</u> ●Off: When video is output from COMPONENT VIDEO OUT terminal.
	HDMI Resolution You can only select items compatible with the connected equipment. This setting normally does not need to be changed. However if you are concerned about output picture quality, it may be improved by changing the setting. Still pictures play at a resolution equivalent to 480p regardless of the settings.	●<u>Auto</u>: Automatically selects the output resolution best suited to the connected television (1080i, 720p or 480p). ●480p ●720p ●1080i
	HDMI Output Display Aspect Settings used when 4:3 aspect video is output on the television as 16:9 aspect. (Only effective when 720p or 1080i is selected as the output resolution)	●Full: Video output is enlarged to match the screen size. ●<u>Normal</u>: Video is output as 4:3 aspect. Side panels (black bars on the left and right) will appear on the screen.
	HDMI RGB Output Range Effective when connected to a device that only supports RGB output.	●<u>Standard</u> ●Enhanced: When the black and white images are not distinct.
	HDMI Audio Output If you set to "On", when playing DVD-Audio with both Multi and 2 channel audio tracks, audio will be output as two-channel output.	●<u>On</u> Audio is output from the speakers on both this unit and the television. If you use a television compatible with HDAVI Control, you can select whether to output audio with this unit's speakers or the television speakers using the television settings. (➡ page 9, Theater speaker) ●Off: Audio is output from this unit's speakers.
	Ctrl with HDMI	● <u>On</u>: When "On" is selected, you can operate other "HDAVI Control" compatible devices using the "Control with HDMI". ●Off
	4:3 TV Settings for DVD-Video Select how DVD-Video widescreen picture is shown on a 4:3 standard aspect television.	●<u>Pan and Scan (Stretch to fit)</u>: Video recorded for a widescreen is played as Pan & Scan (unless prohibited by the producer of the disc). ●Letterbox (Shrink to fit): Video recorded for a widescreen is played in the letterbox style.
	4:3 TV Settings for DVD-RAM Select how DVD-RAM widescreen picture is shown on a 4:3 standard aspect television.	●4:3 Aspect Titles played as recorded. ●Pan and Scan (Stretch to fit): Video recorded for a widescreen is played as Pan & Scan. ●<u>Letterbox (Shrink to fit)</u>: Video recorded for a widescreen is played in the letterbox style.

RQT8655

Refer to control reference on page 37.

Speaker Setting

This setting is only reflected when playing multi-channel audio. There is no effect with two-channel audio.

Changing the delay time

(Center and surround speakers only)
For optimum listening with 5.1-channel sound, all the speakers, except for the subwoofer, should be the same distance from the seating position. If you have to place the center or surround speakers closer to the seating position, adjust the delay time to make up for the difference.
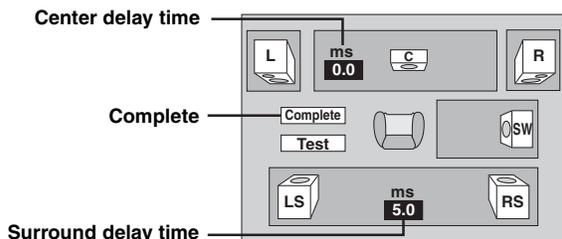
1   **Press [▲, ▼] to select the delay time box and press [ENTER].**
2   **Press [▲, ▼] to adjust the delay time and press [ENTER].**
3   **Press [▲, ▼, ◄] to select "Complete" and press [ENTER].**

If either distance ⓐ or ⓑ is less than ⓒ, find the difference in the relevant table and change to the recommended setting.

⬚ : Recommended placement
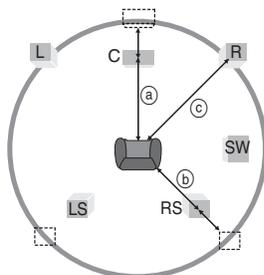
ⓐ **Center speaker**

Difference	Setting
Less than 0 cm (0 foot)	0.0 ms*
Approx. 30 cm (1 foot)	1.0 ms
Approx. 60 cm (2 feet)	2.0 ms
Approx. 90 cm (3 feet)	3.0 ms
Approx. 120 cm (4 feet)	4.0 ms
Approx. 150 cm (5 feet)	5.0 ms

ⓑ **Surround speakers**

Difference	Setting
Less than 0 cm (0 foot)	0.0 ms
Approx. 150 cm (5 feet)	5.0 ms*
Approx. 300 cm (10 feet)	10.0 ms
Approx. 450 cm (15 feet)	15.0 ms

* Factory preset

To return to the previous screen
Press [RETURN].

To exit the screen
Press [SETUP].

Adjusting the speaker levels

(Center and surround speakers only)
Adjust each speaker level to the same level to get appropriate surround effects.
● This cannot be set when headphones are connected.

1   **Press [▲, ▼] to select "Test" and press [ENTER].**
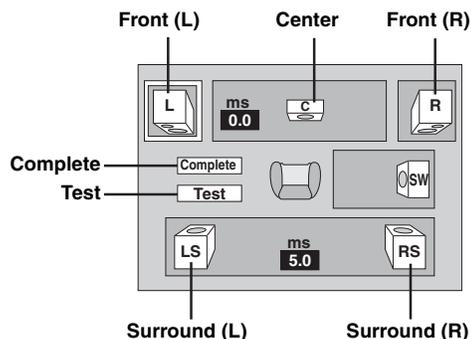
A Test signal is output from each speaker in a clockwise motion. Signals are also output from the front speakers, but they cannot be adjusted. Use this when adjusting other speakers for comparison. When the test signal is being output, press [▲, ▼] to lengthen the time of the test signal.

2   **Press [▲, ▼] to select the desired level for each speaker while test signal is being output.**
● Center: –6 dB to +6 dB
● Surround (L/R): –6 dB to +6 dB

To stop test signal
Press [RETURN].

To return to the previous screen
Press [RETURN].

To exit the screen
Press [SETUP].
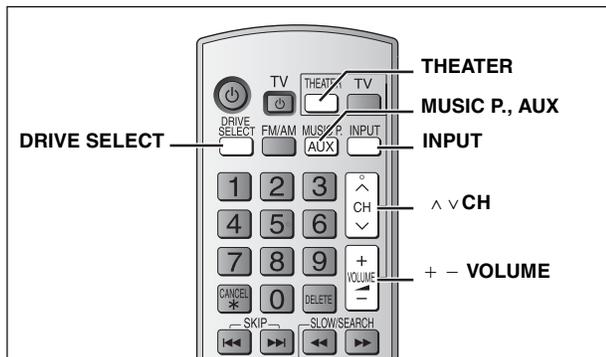
Preparation
Press [THEATER] to switch the remote control to operate this unit.

Connecting other audio equipment

Back of the main unit

OUT

Red White

IN1
You can also connect to the IN2 input terminals on the front.

For recording

Red White

Audio cable (not included)

For play

Red White

Red White

Tape deck

R L
REC IN

R L
PLAY OUT
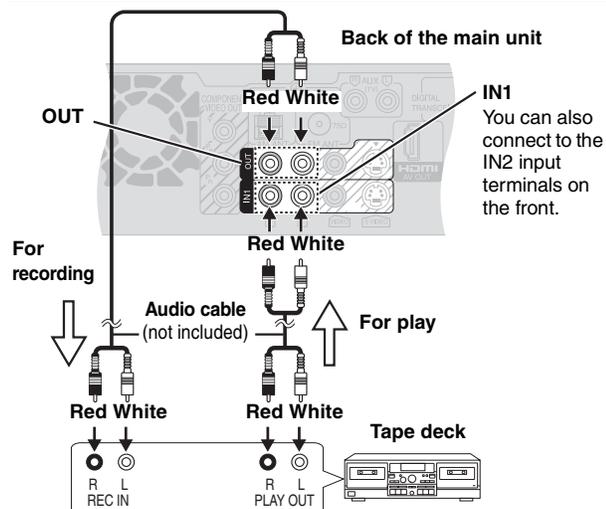
Audio output from this unit becomes 2-channel only. Multi-channel audio is down-mixed (➡ page 49).

■ Recording audio from discs or television broadcasts to a tape deck
1 Discs: Press [DRIVE SELECT] to select the DVD drive as the source.
   Television broadcasts: Press [∧ ∨ CH] to select the channel.
2 Start recording and play.

Refer to the manual of the other unit for details.

> **FM/AM broadcasts and audio from the AUX terminals, "F MUSICP" or "R MUSICP" are not output through the AUDIO OUT terminals.**

■ To playback audio from a tape deck, etc., through this unit's speakers
1 Press [DRIVE SELECT] to select the DVD drive as the source.
2 Press [INPUT] to select "IN1" or "IN2".
3 Start play.

Enjoying TV broadcast with this unit's speakers

Audio cable (not included)

White

AUDIO OUT
L

Red

R

Red White

Television

Back of the main unit
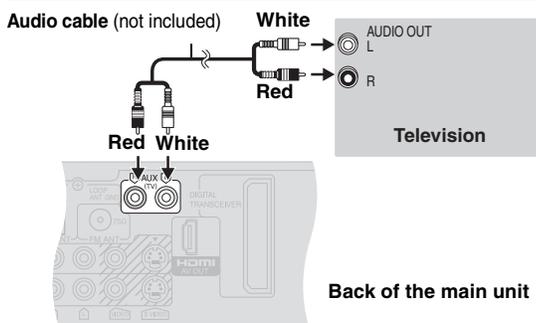
1 Press [AUX] to select "AUX" as the source.
2 Turn on the television and select the channel.
3 Adjust the volume on this unit.
   ≥Set TV volume minimum.

Using headphones

1 Reduce the volume and connect the headphones (not included).
Headphone plug type: ⌀3.5 mm (1/8″) stereo mini plug
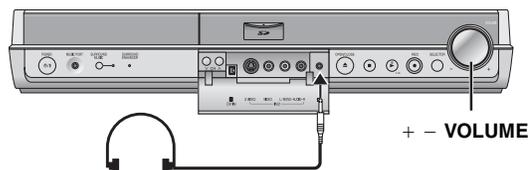
+ − **VOLUME**

2 Adjust headphone volume with [+ − VOLUME].
Audio output becomes 2-channel only. Multi-channel audio is down-mixed (➡ page 49).

Note
≥When headphones are connected, "Equalizer (EQ)" and "Surround Music" can be used to change the sound quality (➡ page 35).
≥Avoid listening for prolonged periods of time to prevent hearing damage.

Using the Music Port

The Music Port allows you to connect and enjoy music from an external device (e.g. MP3 player) through your home theater system.

Preparation
To avoid distorted sound, make sure that any equalizer function of your external device is turned off.

1 Reduce the volume and connect the external device (not included).
Plug type: ⌀3.5 mm (1/8″) stereo mini plug

+ − **VOLUME**

Audio cable (not included)

External device
Reduce the volume before connecting.
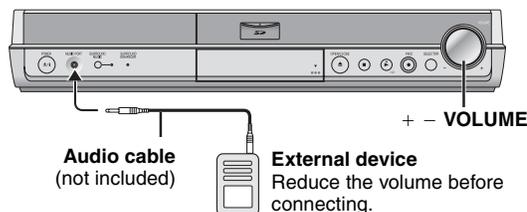
2 Press [MUSIC P.] to select "F MUSICP".

F MUSICP ──────→ R MUSICP*
↑──── AUX ←────┘

```
F MUSICP
```

* Select "R MUSICP" if the optional Panasonic wireless accessory (e.g. SH-FX60) is set up with your home theater system. For details, please refer to its operating instructions.

3 Adjust the external device volume to a normal listening level, and then adjust the volume of the main unit with [+ − VOLUME].

Note
≥When "R MUSICP" is selected, "Equalizer (EQ)" and "H. Bass" can be set to change the sound quality. (➡ page 35)
≥If the audio is distorted, turn the volume down on the connected external device.

Changing the unit's settings / Using other useful functions

Messages

On the television
<div align="right">Page</div>

Cannot finish recording completely.	●The program was copy-protected. ●The disc may be full. ●The maximum number of times you can record the program is exceeded.	— — **12**
Cannot play.	●You inserted an incompatible disc (Discs recorded in PAL video, etc.).	**7**
Cannot record on the disc.	●The disc may be dirty or scratched.	**8**
Unable to format.		
Please check the disc.		
Cannot play back on this unit.	● You tried to play a non-compatible image. ●Turn the unit off and re-insert the card.	**19** **8**
Cannot record. Disc is full.	●Create space by deleting any unnecessary titles. **RAM** **-RW(V)** **+RW** [Even if you delete recorded content from DVD-R, DVD-R DL, +R or +R DL, there is no increase in disc space. Available disc space on DVD-RW (DVD-Video format) or +RW increases only when the last recorded title is deleted.]	**23, 31**
Cannot record. Maximum numbers of titles exceeded.	●Use a new disc.	—
No disc.	●The disc may be upside down.	—
No folders.	●There is no compatible folder in this unit.	**7**
No SD Card **No valid SD card.**	●The card is not inserted. If this message is displayed with a compatible card already inserted, turn off the unit, remove and then re-insert the card. ●The card inserted is not compatible or the card format does not match.	**8** **7**
There is not enough free space on the copying destination.	●Create space by deleting any unnecessary items.	**23, 27, 31, 32**
Please change the disc.	●There may be a problem with the disc. Press [▲ OPEN/CLOSE] on the main unit 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-R DL, DVD-RW (DVD-Video format), +R, +R DL or +RW.	**6**
This disc is not formatted properly.	●You inserted an unformatted DVD-RAM, DVD-RW, +R, +R DL or +RW. Format the disc with this unit.	**32**
⊘	●The operation is prohibited by the unit or disc.	—

On the unit's display
The following messages or service numbers appear on the unit's display when something unusual is detected during startup and use.

SET □ ("□" stands for a number.)	●The remote control and main unit are using different codes. Change the code on the remote control. Press and hold [ENTER] and the indicated number button at the same time for more than 2 seconds.	`5E7 2`	**15** **(Setup Guide)**
HARD ERR ("HARD" and "ERR" are alternately displayed.)	●If there is no change after turning the unit on and off, consult the dealer where the unit was purchased.		—
NoREAD	●The disc is dirty or badly scratched. The unit cannot record, play, or edit. ●The message may appear when the DVD lens cleaner has finished cleaning. Press [▲ OPEN/CLOSE] on the main unit to eject the disc.		**8** —
NoWRIT	●Recording may be unavailable due to a disc problem. Use a new disc.		—
NoERAS	●Deleting an item may be unavailable due to a disc problem. Use a new disc.		—
PLEASE WAIT ("PLEASE" and "WAIT" are alternately displayed.)	●Displayed when the unit is started. This is not malfunction. ●The unit is carrying out its recovery process. You cannot operate the unit while "PLEASE WAIT" is displayed.		— —
UNSUPPORT ("UNSUP" and "PORT" are alternately displayed.)	●You have inserted a disc the unit cannot play or record on.		**6, 7**
UNFORMAT ("UNFOR" and "MAT" are alternately displayed.)	●You have inserted a new DVD-RW/+R/+R DL/+RW or a DVD-RAM/DVD-RW (DVD-Video format) recorded on other equipment.		**32**
F74	●The HDMI connection could not be authenticated due to a transfer malfunction.		—
F75	●The HDMI connection could not be authenticated due to an internal data malfunction.		—
U59	●The unit is hot. The unit switches to standby for safety reasons. Wait about 30 minutes until the message disappears. Select a position with good ventilation when installing the unit. Do not block ventilation holes on the top or rear of the unit.		—
U61	●(When a disc is not inserted) Displays when a malfunction has occurred during recording, playback or copy. This is displayed when the unit is in the recovery process to return to normal operation; it is not broken. Once the display clears you can use the unit again.		—
U71	●The connected equipment is not HDMI compatible.		—

U72
U73
	●The HDMI connection acts unusually.
	  –The connected equipment is not HDMI compatible.
	  –The HDMI cable is damaged.
		—

U88	●(When a disc is inserted) Displays when there was something unusual detected with the disc while playback or copy. This is displayed when the unit is in the recovery process to return to normal operation; it is not broken. Once the display clears you can use the unit again.	**44**
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.	—
AF F61	●Check and correct the speaker cord connections. If this does not fix the problem, there is a power supply problem. Consult the dealer.	**2–5** **(Setup Guide)**

Frequently asked questions

Set up   **Page**

Do the Audio/Video cables need to be connected to the TV in order to see the Menus?	●If your television does not have AUDIO/VIDEO terminals, an RF modulator is necessary. Consult your local dealer for more information.	**6–8** **(Setup Guide)**
The television has both S VIDEO IN terminal, COMPONENT VIDEO IN terminals and HDMI IN terminal. Which terminal should I connect with?	●The output picture quality increases in the following order. –VIDEO IN terminal, S VIDEO IN terminal, COMPONENT VIDEO IN terminals and HDMI IN terminal. However it will take longer to startup when it is connected with the HDMI IN terminal.	—
Is my television progressive output compatible?	●All Panasonic televisions that have 480p input terminals are compatible. Consult the manufacturer if you have another brand of television.	—

Disc

Can I play DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R, +R DL and +RW recorded with this unit with other equipment?	●You can play on compatible equipment such as DVD players after finalizing the disc on this unit. It is not necessary to finalize +RW. However, depending on the condition of the recording, the quality of the disc and capabilities of the DVD player, play may not be possible. To enable play on other DVD players, please use "Create DVD Top Menu" in the DVD Management menu.	**33**
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 their region number does not include "1" or "ALL".	**—** **Cover**
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-R DL, DVD-RW, +R, +R DL and +RW compatibility with this unit.	●This unit records and plays DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R, +R DL and +RW, and plays DVD-RW (VR format).
	●This unit also records and plays high speed recording compatible discs.
	●After recording but before finalizing +R, +R DL discs
	  –You may not be able to play and record discs on this unit after recording them on other Panasonic products or other manufacturer's equipment.
	  –You may not be able to play and record discs on other equipment after recording them on this unit.
	  After finalizing the disc, however, you will be able to play it on any DVD-Video compatible player.
		6, 7
		
		6
		
		—

Please tell me about CD-R and CD-RW compatibility with this unit.	●This unit plays CD-R/CD-RW discs (audio recording discs) which have been recorded under 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 this unit.	**7, 19, 20** **—**

Recording

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 I switch to SAP during recording?	●With DVD-RAM, you can, and the recorded audio also changes. Just press [AUDIO]. ●With DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R, +R DL or +RW you cannot. Change before recording with "Multi-channel TV Sound (MTS)" in the Setup menu.	**13** **39**

Messages / Frequently asked questions

RQT8655

Before requesting service, make the following checks. If you are in doubt about some of the check points, or if the solutions indicated in the chart do not solve the problem, refer to "Customer Services Directory" on page 51.

The following do not indicate a problem with this unit:

●Regular disc rotating sounds. ●Poor reception due to atmospheric conditions. ●Image disturbance during search. ●Interruptions in reception due to periodic satellite broadcasting breaks.	●Operations do not work due to a poor-quality disc. (Try again using a Panasonic disc.) ●The unit freezes due to one of its safety devices being activated. (Press and hold [POWER ⏻/I] on the main unit for 10 seconds.)

Power   **Page**

No power.	●Insert the AC power supply cord securely into a known active AC outlet.	**11** **(Setup Guide)**
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.	**37** —

TV screen and video

The images from this unit do not appear on the television. **Picture is distorted.**	●Make sure that the television is connected to the VIDEO OUT terminal, S VIDEO OUT terminal or COMPONENT VIDEO OUT terminals or HDMI AV OUT terminal on this unit. ●Make sure that the television's input setting (e.g., VIDEO 1) is correct. ●The television isn't compatible with progressive signals. Press and hold [■] and [▶ ×1.3] on the main unit at the same time for about 5 seconds. The setting will change to interlace. ●When connecting with a component video cable to a television that is incompatible with progressive video, check if there is also an HDMI cable connected to the other equipment. If so, turn the power off to the device connected with an HDMI cable, and set the "HDMI Video Output" to "Off" in the Setup menu. ●Picture may not be seen when more than 4 devices are connected with HDMI cables. Reduce the number of connected devices.	**6–10** **(Setup Guide)** — — **39** —
Television 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. If it is not solved by using a signal booster, consult the dealer.	—
Status messages do not appear.	●Select "Automatic" in "Status Messages" in the Setup menu.	**39**
The blue background does not appear.	●Select "On" in "Blue Background" in the Setup menu.	**39**
The 4:3 aspect ratio picture expands left and right. **Screen size is wrong.**	●Use the television to change the aspect. If your television does not have that function, set "Progressive" in the Video menu to "Off". ●If you connect an HDMI cable, set "HDMI Output Display Aspect" in the Setup menu to "Normal". ●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.	**21** **39** **39**
There is a lot of after-image when playing video.	●Set "DNR" in the Video menu to "Off".	**21**
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. ●When you use the HDMI AV OUT terminal for video output, follow the steps below for setting. 1 Connect this unit to the TV with any cable except the HDMI cable. 2 Set "HDMI Video Output" in the Setup menu to "Off".	**21** — **39**
There is no apparent change in picture quality when adjusted with the Video menu in the on-screen menus.	●The effect is less perceivable with some types of video.	—

Displays

The display is dim.	●Change "FL Display" in the Setup menu.	**39**
"12:00A" is flashing on the unit's display.	●Set the clock.	**15** **(Setup Guide)**
Compared to the actual recorded time, less remaining time is displayed.	●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 time recorded on the disc and the available time shown do not add up. **The play time shown for MP3 does not agree with the actual time.**	●Times shown may disagree with actual times. ●Even if you delete recorded content from DVD-R, DVD-R DL, +R or +R DL, there is no increase in disc space. ●Available recording space on DVD-RW (DVD-Video format) or +RW increases only when the last recorded title is deleted. It does not increase if other titles are deleted. ●Available recording space on DVD-R, DVD-R DL, +R and +R DL reduces if you have repeatedly recorded and edited more than 200 times or so. (For the second layer on DVD-R DL and +R DL, this happens after about 60 times.) ●While searching, the elapsed time may not display correctly.	— — — — —
"U88" is displayed and the disc cannot be ejected.	●The unit is carrying out the recovery process. Do the following to eject the disc. 1 Press [POWER ⏻/I] on the main unit to switch the unit to standby. If the unit doesn't switch to standby, press and hold [POWER ⏻/I] on the main unit for about 10 seconds. The unit is forcibly switched to standby. 2 While the unit is off, press and hold [■] and [CH ∧] on the main unit at the same time for about 5 seconds. Remove the disc.	—
" 🅦 " is flashing. **(When using optional wireless accessory)**	●There is no link between the main unit and the wireless accessory. Check that the wireless accessory is plugged into the AC outlet. ●Ensure that the digital transceiver is fully inserted into the slot of the main unit.	— —

Radio | | **Page**

Noise is heard. **Sound is distorted.** **"TUNED" is flashing or doesn't light.** **"ST" is flashing or doesn't light during FM broadcasts.**	●This is being caused by weak signal reception. When listening to FM radio, try the following operations. −Adjust the position of the FM antenna. −Use an FM outdoor antenna. −Press [FM MODE] to set to "MONO". When listening to AM radio, try the following operations. −Adjust the position of the AM antenna. −Press [FM MODE] to select between "BP1" and "BP4" that receives good reception.	— — 34 34 — 34
A beat sound is heard.	●Turn the television off or separate it from the unit.	—
A low hum is heard during AM broadcasts.	●Separate the antenna from other cables and cords.	—
The radio cannot be tuned in.	●Turn off nearby televisions, video cassette recorders, satellite receivers and computers.	—
All programmed radio presets are erased. **Returns to the original setting even after making changes to the sound field system settings.**	●Radio and sound field system settings are stored to memory after pressing [⏻]. Do not remove the AC power supply cords until "BYE" disappears from the unit's display.	—

Sound

No sound. **Low volume.** **Distorted sound.** **Cannot hear the desired audio type.**	●Check the connections and settings. ●Press [AUDIO] to select the audio. ●Some multi-channel DVD-Audio will prevent down-mixing of all or part of their contents if this is the manufacturer's intention. In the following situations, these DVD-Audio discs will not output audio correctly (Front two channels only, etc. will output audio). −When using headphones. −When audio is output through the television speakers. ●Turn the volume up. ●Turn muting off. ●Switch off the unit, determine and correct the cause, then switch the unit on. Causes include: −Shorting (bare wires touching) of positive and negative speaker wires. −Using speakers with an impedance lower than that rated for this unit. −Straining of the speakers through excessive volume or power. −Using the unit in a hot environment without proper ventilation. ●The factory settings for the "H. Bass" and Subwoofer levels are optimized for 5.1 channel movie playback. If the bass seems too heavy during 2-channel disc playback, etc. change the settings. ● When "R MUSICP" is selected, you cannot set anything other than "Equalizer (EQ)" or "H. Bass" to change the sound quality. Also, when using headphones, you cannot set anything other than "Equalizer (EQ)" or "Surround Music". ●If the audio is distorted when "F MUSICP" or "R MUSICP" is selected, turn the volume down on the connected external device. ●When audio playback is output through multi-channel, "Sound Field Control (SFC)" cannot be set. ●The sound effects will not work when audio is output from the HDMI AV OUT terminal. ●Audio may not be heard when more than 4 devices are connected with HDMI cables. Reduce the number of connected devices. ●Depending on the connected equipment, the sound may be distorted if this unit is connected with an HDMI cable.	2–11 (Setup Guide), 39 17 49 41 — — 36 — 35, 36 — 41 — — — —
Cannot switch audio.	●You cannot change the audio type when DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R, +R DL or +RW is in the disc tray. ●You cannot change the audio type when playing DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R, +R DL or +RW. [You can select "Main" or "SAP" in "Multi-channel TV Sound (MTS)" in the Setup menu before recording.] ●There are discs where audio cannot be changed because of how the disc was created.	— 39 —
Humming heard during play.	●An AC power supply cord or fluorescent light is near the main unit. Keep other appliances and cords away from the main unit.	—

Operation

Cannot operate the television.	●Press [TV] to switch the remote control to operate the television. ●Change manufacturer code. Some televisions cannot be operated even if you change the code.	— 15 (Setup Guide)
The remote control doesn't work.	●Press [THEATER] to switch the remote control to operate this unit. ●The remote control and main unit are using different codes. Change the code on the remote control. Press and hold [ENTER] and the indicated number button at the same time for more than 2 seconds. ●The batteries are depleted. Replace them with new ones. ●You are not pointing the remote control at the main unit's remote control signal sensor during operation. ●Colored glass may obstruct the signal reception/transmission. ●Don't place the signal sensor in direct sunlight or in areas that may be subject to sunlight exposure. ●It may be necessary to set the code on the remote control again after changing the batteries. ●It may be necessary to set the manufacturer code again after changing the batteries.	— 15 (Setup Guide) 4 4 — — 15 (Setup Guide) 15 (Setup Guide)

RQT8655

Operation (Continued)   **Page**

The unit is on but cannot be operated.	●Recording drive or playback drive has not been selected properly.	12, 16
	●Some operations may be prohibited by the disc.	—
	●The unit is hot ("U59" appears on the display). Wait for "U59" to disappear.	—

	●One of the unit's safety devices may have been activated. Reset the unit as follows:
	1 Press [POWER ⏻/I] on the main unit to switch the unit to standby.
	   If the unit doesn't switch to standby, press and hold [POWER ⏻/I] on the main unit for about 10 seconds. The unit is forcibly switched to standby.
	   Alternatively, disconnect the AC power supply cord, wait one minute, then reconnect it.
	2 Press [POWER ⏻/I] on the main unit to switch it on. If the unit still cannot be operated, consult the dealer.
		—

	●Condensation has formed. Wait 1 to 2 hours for it to evaporate.	—
Cannot eject disc.	●The unit is recording.	—
	●The unit may have a problem. While the unit is off, press and hold [■] and [CH ∧] on the main unit at the same time for about 5 seconds. Remove the disc and consult the dealer.	—
Startup is slow. When the unit is turned on, audio and video output takes a long time.	●Startup takes time in the following situations. –A disc other than a DVD-RAM is inserted. –The clock is not set. –Immediately after a power failure or the AC power supply cord is connected. –When the unit is connected with an HDMI cable.	—
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.	—
During disc or card operation the unit does not respond.	●The selector has been set to "FM", "AM", "AUX", "F MUSICP" or "R MUSICP". Press [DRIVE SELECT] to select "DVD" or "SD" as the source.	—

Recording, scheduled recording and copying

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
	●**RAM** **-RW(V)** **+R** **+R DL** **+RW** The disc is unformatted. Format the disc using DVD Management.	32
	●The write-protect tab on the cartridge is set to PROTECT, or the disc is protected with DVD Management.	32
	●Some programs have limitations on the number of times they can be recorded. (CPRM)	49
	●The disc is full or nearly full. Erase unneeded titles or use another disc.	23, 31
	●You cannot record on finalized DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R, +R DL or DVD-RW (VR format) discs.	33
	●Due to peculiarities of DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R, +R DL or +RW you may be unable to record onto them if you either insert and remove the disc or switch the unit on and off while a disc is loaded, a total of fifty times.	—
	●DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R, +R DL and +RW recorded on this unit may not be recordable on other Panasonic DVD recorders.	—
	●Audio from FM/AM broadcasts cannot be recorded.	—
Cannot record from external equipment.	●Check the connection is correct.	6–9 (Setup Guide) 30
	●Select the input channel ("IN1", "IN2" or "DV") for the equipment you have connected.	—
Scheduled recording does not work properly	●The scheduled program is incorrect or different scheduled program times overlap. Correct the program.	15
	●Set the clock.	15 (Setup Guide)
Scheduled recording does not stop even when [■] is pressed.	●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.	37
	●1 Press [DRIVE SELECT] to select the DVD drive. 2 Press [■], press [◄, ►] to select "Stop recording" and then press [ENTER]. Recording stops.	—
The scheduled program remains even after recording finishes.	●The scheduled program remains if set to Monday - Friday, Monday - Saturday, Sunday - Saturday or weekly.	14
A part or whole of a recorded title has been lost.	●If there is a power failure or the plug is disconnected from the household AC outlet while recording or editing, the title may be lost or the disc may become unusable. You will have to format the disc (**RAM** **-RW(V)** **+RW**) or use a new disc. Please take care as we cannot offer any guarantee regarding lost titles or discs.	32
The DV camcorder recording function does not work.	●If images cannot be recorded or if the recording is aborted, check the connections and DV equipment settings.	30
	●You cannot start recording until the images from the DV equipment appear on the television.	—
	●Recording may not be performed as desired if the time codes on the tape in the DV equipment are not successive.	—
	●Depending on the equipment, the DV camcorder recording may not operate properly.	—
	●You can only record audio/video images on a DV tape.	—

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.	**12**
	≥The disc is dirty.	**8**
	≥You tried to play a blank disc or unplayable disc on this unit.	**6, 7**
	≥You tried to play +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.	**38**
	≥You cannot play discs during DV camcorder recording.	—
Audio and video momentarily pause.	≥This occurs between playlist chapters.	—
	≥This occurs between chapters and with partially deleted titles on +RW, finalized DVD-R, DVD-R DL, DVD-RW (DVD-Video format), +R and +R DL that have been copied using the high speed mode.	—
	≥This occurs as scenes change during Quick View.	—
	≥When playing a title recorded on both layers of a DVD-R DL or +R DL, video and audio may momentarily cut out when the unit is switching layers.	—
DVD-Video is not played.	≥You have set a ratings level to limit DVD-Video play. Change this setting.	**38**
Alternative soundtrack and subtitles cannot be selected.	≥The languages are not recorded on the disc.	—
	≥You may have to use the disc's menus to select languages.	**16**
No subtitles.	≥When progressive output is on, closed captions cannot be displayed.	—
	≥Subtitles are not recorded on the disc.	—
	≥Set "Subtitle" on the on-screen menu to "On".	**21**
Angle cannot be changed.	≥Angles can only be changed during scenes where different angles are recorded.	—
You have forgotten your ratings password. **You want to cancel the ratings level.**	≥While the disc tray is open, press [DRIVE SELECT] to select DVD drive then press and hold [● REC] and [▶ ×1.3] on the main unit at the same time for 5 or more seconds. ("INIT" will appear on the unit's display). The ratings level returns to "8".	—
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.	≥The stopped position is cleared when: –You press [■] several times. –You open the tray. – DVD-A CD VCD You turn the unit off.	—

Edit

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 this unit.	**6, 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 to 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 delete chapters.	≥When the chapter is too short to erase, use "Combine Chapters" to make the chapter longer.	**23**
The available recording space doesn't increase even after deleting recordings on the disc.	≥Available recording space on DVD-R, DVD-R DL, +R or +R DL does not increase even after erasing previously recorded titles.	—
	≥Available recording space on DVD-RW (DVD-Video format) or +RW 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 at once in a title if the title also includes still pictures. Select them individually.	—

Still pictures

Cannot display Direct Navigator screen.	≥This screen cannot be displayed during recording or copying.	—
Cannot edit or format a card.	≥Release the card's protection setting. (With some cards, the "Write Protection Off" message sometimes appears on the screen even when protection has been set.)	**32**
The contents of the card cannot be read.	≥The card format is not compatible with the unit. (The contents on the card may be damaged.) Format using FAT 12 or FAT 16 with other equipment or format the card with this unit.	**7, 19, 32**
	≥The card contains a folder structure and/or file extensions that are not compatible with this unit.	**7**
	≥Turn off and then turn on the unit again.	—
	≥You can use SD Memory Cards with capacities from 8MB to 2GB on this unit.	**7**
Copying, deleting and setting protection takes a long time.	≥When there are a lot of folders and files, it may sometimes take a few hours.	—
	≥When repeating copying or deleting, it may sometimes take a long time. Format the disc or card.	**32**
Scheduled recording began in the middle of editing a still picture.	≥If it comes to the time scheduled for recording, the recording may start even though you are editing.	—

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.

The servicer will require all components to service your system. Therefore, should service ever be necessary, be sure to bring the entire system.

Product information

For product information or assistance with product operation:
Refer to "Customer Services Directory" on page 51.

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 _____SC-RT50_____ SERIAL NUMBER _____

User memo:

DATE OF PURCHASE _____ **DEALER NAME** _____ **DEALER ADDRESS** _____ _____ **TELEPHONE NUMBER** _____

Glossary

CPPM (Content Protection for Prerecorded Media)
A copy protection system used for DVD-Audio files. This unit supports CPPM.

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.

Dolby Digital
This is a method of coding digital signals developed by Dolby Laboratories. Apart from stereo (2-channel) audio, these signals can also be multi-channel audio. A large amount of audio information can be recorded on one disc using this method.

Down-mixing
This is the process of remixing the multi-channel audio found of some discs into two-channel output.
Some multi-channel DVD-Audio will prevent down-mixing of all or part of their contents if this is the manufacturer's intention.
This unit cannot down-mix these types of discs. (When the disc is automatically down-mixed, audio will not be output correctly when using headphones, etc. Audio is output only with the front two channels, etc.)

DPOF (Digital Print Order Format)
DPOF is the standard printing format for still picture data taken by a digital camera, etc. It is used for automatic printing at a photo developing store or on your home printer.

Drive
In the instance of this unit, this refers to the disc (DVD) and SD card (SD). These perform the reading and writing of data.

DTS (Digital Theater Systems)
This surround system is used in many movie theaters. There is good separation between the channels, so realistic sound effects are possible.

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 listen at low volumes but still hear dialog clearly.

Film and video
DVD-Video are recorded using either film or video. This unit can determine which type has been used, then uses the most suitable method of progressive output.
Film: Recorded at 24 or 30 frames per second. Generally appropriate for motion picture films.
Video: Recorded at 30 frames/60 fields per second. Generally appropriate for TV drama programs or animation.

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-R DL, DVD-RW (DVD-Video format), +R or +R DL on this 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.

Folder
This is a place on the disc or memory card where groups of data are stored together. In the case of this unit, it refers to the place where still pictures (JPEG, TIFF) are stored.

Formatting
Formatting is the process of making media such as DVD-RAM recordable on recording equipment.
You can format DVD-RAM, DVD-RW (only as DVD-Video format), +R, +R DL or +RW and SD memory card on this unit.
When you use DVD-RW, +R, +R DL or +RW, it must be formatted.
Formatting irrevocably deletes all contents.

Frames and fields
Frames refer to the single images that constitute the video you see on your television. Each frame consists of two fields.

Frame	Field	Field
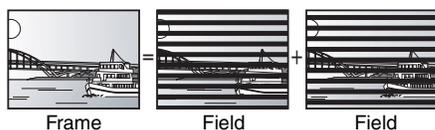
≥A frame still shows two fields, so there may be some blurring, but picture quality is generally better.
≥A field still shows less picture information so it may be rougher, but there is no blurring.

HDMI (High-Definition Multimedia Interface)
HDMI is a next-generation digital interface for consumer electronic products. Unlike conventional connections, it transmits uncompressed digital video and audio signals on a single cable. This unit supports high-definition video output (720p,1080i) from HDMI AV OUT terminal. To enjoy high-definition video a high-definition compatible television is required.

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 feature 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 MP3 you have recorded onto CD-R and CD-RW.

Pan & Scan/Letterbox
In general, DVD-Video are produced with the intention that they be viewed on a widescreen television (16:9 aspect ratio), so images often don't fit regular (4:3 aspect ratio) televisions. Two 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.
(This 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 television must be compatible to enjoy progressive video.

Protection
You can prevent accidental deletion by setting writing protection or deletion 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.

1080i
In one high definition image, 1080 alternating scan lines pass every 1/60th of a second to create an interlace image. Because 1080i more than doubles current television broadcasts of 480i, the detail is much clearer and creates a more realistic and rich image.

720p
In one high definition image, 720 scan lines pass at the same time every 1/60th of a second to create a progressive image. Since progressive video does not alternate scan lines like interlace, there is a minimal amount of screen flicker.

Specifications

■ AMPLIFIER SECTION

RMS Output Power: Dolby Digital Mode
1 kHz, 10 % total harmonic distortion
Front:	190 W per channel (8 Ω)
Center:	320 W (4 Ω)
Surround:	90 W per channel (4 Ω)

100 Hz, 10 % total harmonic distortion
Subwoofer:	320 W (4 Ω)
Total RMS Dolby Digital mode power:	1200 W

FTC Output Power: Dolby Digital Mode
120 Hz–20 kHz, 1.0 % total harmonic distortion
Front:	105 W per channel (8 Ω)
Center:	220 W (4 Ω)
Surround:	65 W per channel (4 Ω)

45 Hz–120 Hz, 1.0 % total harmonic distortion
Subwoofer:	190 W (4 Ω)
Total FTC Dolby Digital mode power:	750 W

Input sensitivity/Input impedance
MUSIC PORT:	100 mV, 4.7 kΩ

■ FM TUNER SECTION
Frequency range:	87.9–107.9 MHz (200 kHz step)
	87.5–108.0 MHz (100 kHz step)
Antenna terminals:	75 Ω unbalanced

■ AM TUNER SECTION
Frequency range:	520–1710 kHz (10 kHz step)

■ RECORDER SECTION

Recordable discs:
DVD-RAM:	Ver. 2.0
	Ver. 2.1/3X–SPEED DVD-RAM Revision 1.0
	Ver. 2.2/5X–SPEED DVD-RAM Revision 2.0
DVD-R:	For General Ver. 2.0
	For General Ver. 2.0/4X–SPEED DVD-R Revision 1.0
	For General Ver. 2.x/8X–SPEED DVD-R Revision 3.0
	For General Ver. 2.x/16X–SPEED DVD-R Revision 5.0
	For General Ver. 2.x/16X–SPEED DVD-R Revision 6.0
	For DL Ver. 3.0
	For DL Ver. 3.x/4X–SPEED DVD-R for DL Revision 1.0
DVD-RW:	Ver. 1.1
	Ver. 1.x/2X–SPEED DVD-RW Revision 1.0
	Ver. 1.x/4X–SPEED DVD-RW Revision 2.0
	Ver. 1.x/6X–SPEED DVD-RW Revision 3.0
+R:	Ver. 1.0
	Ver. 1.1
	Ver. 1.2
	Ver. 1.3
	for DL Ver. 1.0
+RW:	Ver. 1.1, Ver. 1.2/4X–SPEED

Recording system:
DVD-RAM:	DVD Video Recording format
DVD-R:	DVD-Video format
DVD-R DL (Dual Layer):	DVD-Video format
DVD-RW:	DVD-Video format
+R	
+R DL (Double Layer)	
+RW	

Recording time:
●Maximum 8 hours (using 4.7 GB disc)
XP: Approx. 1 hour	SP: Approx. 2 hours
LP: Approx. 4 hours	EP: Approx. 6 hours or 8 hours

Playable discs:
DVD-RAM:	DVD Video Recording format
DVD-R:	DVD-Video format
DVD-R DL (Dual Layer):	DVD-Video format
DVD-RW:	DVD-Video format, DVD Video Recording format
+R, +R DL (Double Layer), +RW	
DVD-Video, DVD-Audio, CD-Audio (CD-DA), Video CD	
CD-R/CD-RW (CD-DA, Video CD, MP3, JPEG)	

Optical pick-up:	System with 1 lens, 2 integration units
	(662 nm wavelength for DVDs, 780 nm wavelength for CDs)

LASER Specification
Class 1 LASER Product
Wave Length:	780 nm (CDs), 662 nm (DVDs)
Laser Power:	No hazardous radiation is emitted with the safety protection

Television system
TV system:	NTSC system, 525 lines, 60 fields
Antenna reception input:	TV Channel: 2 ch–69 ch
	CATV Channel: 1 ch–125 ch
RF converter output:	Not provided

Video system
Recording system:	MPEG2 (Hybrid VBR)	
Input:	LINE (pin jack) ×2,	1.0 Vp-p; 75 Ω
	S connector ×2	Y:1.0 Vp-p; 75 Ω
		C: 0.286 Vp-p; 75 Ω
Output:	LINE (pin jack) ×1,	1.0 Vp-p; 75 Ω
	S connector ×1	Y:1.0 Vp-p; 75 Ω
		C: 0.286 Vp-p; 75 Ω
Component video output:	Y, P$_B$, P$_R$ ×1	Y: 1.0 Vp-p; 75 Ω
	(480i/480p)	P$_B$: 0.7 Vp-p; 75 Ω
		P$_R$: 0.7 Vp-p; 75 Ω

Audio system
Recording system:	Dolby Digital (2ch)
Analog Input:	LINE (pin jack) ×2
	Reference input: 309 mVrms
	FS: 2 Vrms (1 kHz, 0 dB)
	Input impedance: 47 kΩ
Analog Output:	LINE (pin jack) ×1
	Reference output: 309 mVrms
	FS: 2 Vrms (1 kHz, 0 dB)
	Output impedance: 1 kΩ
	(Load impedance: 10 kΩ)
Number of channels:	Recording: 2 channels
	Playback: 2 channels

HDMI Output:	(19 pin type A) ×1 HDMI Ver.1.2a (EDID Ver.1.3)

SD Card Slot
Still Picture (JPEG, TIFF)	SD Memory Card Slot: 1 pc
Compatible media	SD Memory Card[*1], MultiMediaCard
Format	FAT 12, FAT 16

Image file format:
JPEG conforming to DCF (Design rule for Camera File system)
TIFF (Uncompressed RGB chunky), DPOF Compatible
Sub sampling; 4:2:2 or 4:2:0
Number of pixels:	between 34 × 34 and 6144 × 4096 pixels
Thawing time:	Approx. 3 sec (6M pixels, JPEG)
DV input:	IEEE 1394 Standard, 4 Pin: 1 pc
Regional Code:	# 1
Clock unit:	Quartz-controlled 12-hour digital display

■ SPEAKER SECTION

●**Front speakers** `SB-FS940`
Type:	2 way, 3 speaker system, Bass-ref.
Woofer/Tweeter:	6.5 cm (2¹/₂″) CONE type×2, 6 cm (2³/₈″) CONE type
Impedance/Input power (IEC):	8 Ω/190 W (Max)[*2]
Output sound pressure:	85 dB/W (1.0 m)
Frequency range:	91 Hz–30 kHz (−16 dB), 104 Hz–25 kHz (−10 dB)
Dimensions (W×H×D):	258 mm×1350 mm (Max)/1100 mm (Min)×269 mm
	[10⁵/₃₂″×53⁵/₃₂″ (Max)/43¹/₄″ (Min)×10¹⁹/₃₂″]
Mass:	Approx. 5.2 kg (11.5 lb.)

●**Center speaker** `SB-PC940`
Type:	2 way, 3 speaker system, Bass-ref.
Woofer/Tweeter:	6.5 cm (2¹/₂″) CONE type×2, 6 cm (2³/₈″) CONE type
Impedance/Input power (IEC):	4 Ω/320 W (Max)[*2]
Output sound pressure:	84 dB/W (1.0 m)
Frequency range:	103 Hz–30 kHz (−16 dB), 120 Hz–25 kHz (−10 dB)
Dimensions (W×H×D):	320 mm×92 mm×90 mm
	(12¹⁹/₃₂″×3⁵/₈″×3¹⁷/₃₂″)
Mass:	Approx. 1.4 kg (3.1 lb.)

●**Surround speakers** `SB-FS941`
Type:	1 way, 1 speaker system, Bass-ref.
Full range:	6.5 cm (2¹/₂″) CONE type
Impedance/Input power (IEC):	4 Ω/90 W (Max)[*2]
Output sound pressure:	79 dB/W (1.0 m)
Frequency range:	84 Hz–25 kHz (−16 dB), 96 Hz–22 kHz (−10 dB)
Dimensions (W×H×D):	92 mm×270 mm×97 mm
	(3⁵/₈″×10⁵/₈″×3¹³/₁₆″)
Mass:	Approx. 0.7 kg (1.5 lb.)

●**Subwoofer** `SB-W940`
Type:	1 way, 1 speaker system, Bass-ref.
Woofer:	17 cm (6³/₄″) CONE type
Impedance/Input power (IEC):	4 Ω/320 W (Max)
Output sound pressure:	81 dB/W (1.0 m)
Frequency range:	29 Hz–160 Hz (−16 dB)
	34 Hz–135 Hz (−10 dB)
Dimensions (W×H×D):	235 mm×448 mm×397 mm
	(9¹/₄″×17⁵/₈″×15⁵/₈″)
Mass:	Approx. 6.7 kg (14.8 lb.)

■ GENERAL
Power supply:	AC 120 V, 60 Hz
Power consumption:	Main unit `SA-RT50` : 145 W
Dimensions (W×H×D) (Main unit `SA-RT50`):	430 mm×75 mm×385 mm
	(16¹⁵/₁₆″×2³¹/₃₂″×15⁵/₃₂″)
Mass (Main unit `SA-RT50`):	Approx. 5.3 kg (11.8 lbs)
	(Dimensions and Mass do not include the speakers.)
Operating temperature range:	5 °C–40 °C (41 °F–104 °F)
Operating humidity range:	10 %–80 % RH (no condensation)

Power consumption in standby mode:
approx. 3.6 W [Quick Start: Off, FL Display: Bright (Shipping condition)]
approx. 1.8W (Quick Start: Off, FL Display: Automatic)

※1 Includes miniSD™ cards. (A miniSD™ adaptor needs to be inserted.)

※2 Ratings with the low cut filter equipped amplifier.

●Specifications are subject to change without notice.
Mass and dimensions are approximate.
●Useable capacity will be less (SD Memory Card).
●Total harmonic distortion is measured by a digital spectrum analyzer.

Limited Warranty

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 Infanteria, Km. 9.5
San Gabriel Industrial Park, Carolina, Puerto Rico 00985

Panasonic Audio Products 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
Audio Products (except items listed below)	One (1) year	One (1) year
USB Reader-Writer, Personal Computer Card Adapters (in exchange for defective item)	One (1) year	Not Applicable
Accessories: Headphones, Cartridges, Microphones, Adapters	Ninety (90) days	Ninety (90) days
Rechargeable Batteries, DVD-R/-RAM Discs (in exchange for defective item)	Ten (10) days	Not Applicable
SD Memory Cards, Rechargeable Battery Packs (in exchange for defective item)	Ninety (90) 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 (1-800-211-7262) 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 memory 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

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Index

●Outlined typeface numbers (e.g., **13**) represent page numbers in the Setup Guide.