# Operating Instructions

## DVD Recorder

## Model No. DMR-ES10

# Panasonic®

**DVD VIDEO RAM**  **DVD RW/R**  **DVD AUDIO**  **COMPACT disc DIGITAL VIDEO**  **RAM COMPATIBLE RECORDER**

**For Continental Europe**

**Q Link**   **SHOWVIEW**

**For Asia**

**G-CODE**   **G-CODE®**

**For Australia and N.Z.**

**G-CODE®**

# DIGA

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## Region number supported by this unit

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

### For Continental Europe and Middle East

• The region number of this unit is "**2**".
• The unit will play DVD-Video marked with labels containing "**2**" or "**ALL**".
   Example:

**2**   **ALL**   **2 3 5**

### For Asia

• The region number of this unit is "**3**".
• The unit will play DVD-Video marked with labels containing "**3**" or "**ALL**".
   Example:

**3**   **ALL**   **2 3 6**

### For Australia and N.Z.

• The region number of this unit is "**4**".
• The unit will play DVD-Video marked with labels containing "**4**" or "**ALL**".
   Example:

**4**   **ALL**   **2 4 6**

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## *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.

## CAUTION!

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

## WARNING:

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

## CAUTION!

- **DO NOT INSTALL OR PLACE THIS UNIT IN A BOOKCASE,**
  **BUILT-IN CABINET OR IN ANOTHER CONFINED SPACE.**
  **ENSURE THE UNIT IS WELL VENTILATED. TO PREVENT**
  **RISK OF ELECTRIC SHOCK OR FIRE HAZARD DUE TO**
  **OVERHEATING, ENSURE THAT CURTAINS AND ANY**
  **OTHER MATERIALS DO NOT OBSTRUCT THE**
  **VENTILATION VENTS.**
- **DO NOT OBSTRUCT THE UNIT'S VENTILATION OPENINGS**
  **WITH NEWSPAPERS, TABLECLOTHS, CURTAINS, AND**
  **SIMILAR ITEMS.**
- **DO NOT PLACE SOURCES OF NAKED FLAMES, SUCH AS**
  **LIGHTED CANDLES, ON THE UNIT.**
- **DISPOSE OF BATTERIES IN AN ENVIRONMENTALLY**
  **FRIENDLY MANNER.**

**For Continental Europe, Australia and N.Z.**
THIS UNIT IS INTENDED FOR USE IN MODERATE CLIMATES.

**For Asia and Middle East**
THIS UNIT IS INTENDED FOR USE IN TROPICAL CLIMATES.

This product may receive radio interference caused by mobile telephones during use. If such interference is apparent, please increase separation between the product and the mobile telephone.

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

## CLASS 1 LASER PRODUCT

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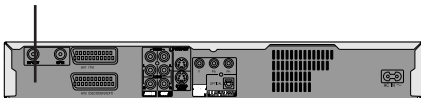
| | |
|---|---|
| **DANGER** | VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM. (FDA 21 CFR) |
| **CAUTION** | VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM. (IEC60825-1) |
| **ATTENTION** | RAYONNEMENT LASER VISIBLE ET INVISIBLE EN CAS D'OUVERTURE.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

(Inside of product)
(Tuotteen sisällä)
(Produktets innside)

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# Caution for AC Mains Lead

**(For Saudi Arabia)**
For your safety, please read the following text carefully.
This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.
Check for the ASTA mark ⟨A⟩ or the BSI mark ⟨⟩ on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local dealer.

### CAUTION!
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as stated below.
If in any doubt please consult a qualified electrician.

### IMPORTANT
The wires in this mains lead are coloured in accordance with the following code:
Blue: Neutral, Brown: Live.
As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.
The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

**WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE**

**LETTER E, BY THE EARTH SYMBOL ⏚ OR COLOURED GREEN OR GREEN/YELLOW.**

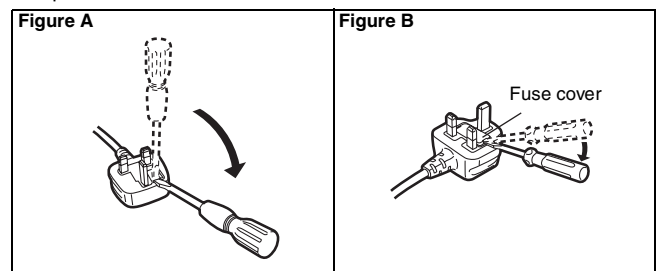**THIS PLUG IS NOT WATERPROOF—KEEP DRY.**

### Before use
Remove the connector cover.

### How to replace the fuse
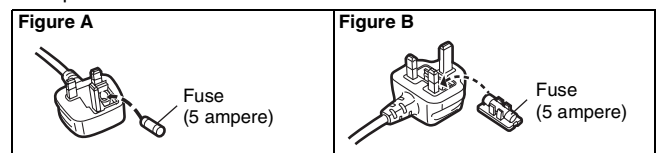The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.
Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

| Figure A | Figure B |
|---|---|
| | Fuse cover |

2. Replace the fuse and close or attach the fuse cover.

| Figure A | Figure B |
|---|---|
| Fuse (5 ampere) | Fuse (5 ampere) |

# Table of contents

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# Accessories

Please check and identify the supplied accessories.
(Product numbers correct as of January 2005. These may be subject to change.)

**1   Remote control**
**For Continental Europe**
(EUR7720KL0)
**For Australia, N.Z. and Asia**
(EUR7720KN0)
**For Middle East**
(EUR7720KP0)

**For Continental Europe and Asia**    **For Australia and N.Z.**

**1   AC mains lead**
● For use with this unit only.
   Do not use it with other equipment.
   Also do not use the cords for other equipment
   with this unit.

**For Middle East**

**For Saudi Arabia**
**2   AC mains lead**

**2   Batteries**
   for remote control

**1   RF coaxial cable**

**1   Audio/video cable**

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# The remote control

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

Note

If you cannot operate the unit or television using the remote control
after changing the batteries, please re-enter the codes (➔ page 14).

## ■ Use

Remote control signal sensor

20°
30°    20°
   30°

7 m directly in front of the unit

RQT8020

# Disc information

## Discs you can use for recording and play (12 cm/8 cm)

| Disc type | DVD-RAM<br>● 4.7 GB/9.4 GB, 12 cm<br>● 2.8 GB, 8 cm | DVD-R (DVD-Video format)<br>● 4.7 GB, 12 cm<br>● 1.4 GB, 8 cm | |
| --- | --- | --- | --- |
| Logo | DVD RAM RAM4.7 | DVD R R4.7 | |
| Indication in these instructions | RAM | Before finalizing | -R |
| | | After finalizing | DVD-V |
| Main use | Re-writable discs | One time recording discs (recordable until the disc is full) | |
| Maximum recording time<br>(➔ page 15, Recording modes and approximate recording times) | 8 hours<br>(16 hours in EP ( 8Hours ) mode on double-sided disc ※1) | 8 hours | |
| Play on other players | Only on DVD-RAM compatible players. It is not necessary to finalize the disc. (➔ page 41) | Only after finalizing the disc. (➔ page 33) | |
| **What you can do on this unit ( ✓ : Can do  ✗ : Cannot do)** | | | |
| Chasing playback | ✓ | ✗ | |
| Recording broadcasts that allow one copy | ✓<br>(CPRM (➔ page 41) compatible discs only.) | ✗ | |
| Recording both M 1 and M 2 of bilingual broadcast | ✓ | ✗<br>Only one is recorded<br>(➔ page 36, Bilingual Audio Selection) | |
| Recording 16:9 aspect picture | ✓ | ✗<br>(The picture is recorded in 4:3 aspect.) | |
| Enter programme (title) name | ✓ | ✓ | |
| Erase programme (title) | ✓<br>(Available space increases after erasing.) | ✓<br>(Available space does not increase after erasing.) | |
| Creating playlists | ✓ | ✗ | |

● We recommend using Panasonic discs. We recommend using DVD-RAM discs with cartridges to protect them from scratches and dirt.
● You may not be able to record to DVD-R, DVD-RW and +R discs on this unit or play them due to the condition of the recording.
● You cannot record programmes that allow "One time only recording" to CPRM compatible DVD-R and DVD-RW on this unit.
● You can use high speed recording compatible discs on this unit.
※1  You cannot record or play continuously on two sides.

## Play-only discs (12 cm/8 cm)

| Disc type | DVD-Video | DVD-Audio | DVD-RW (DVD Video Recording format) | +RW |
| --- | --- | --- | --- | --- |
| Logo | DVD VIDEO  DVD VIDEO | DVD AUDIO | DVD RW | ——— |
| Indication in these instructions | DVD-V | DVD-A | -RW(VR) | DVD-V |
| Instructions | High quality movie and music discs | High fidelity music discs<br>● Played on this unit in 2 channels.<br>● There is no digital output. | DVD-RW recorded on another DVD Recorder ※3<br>● You can play programmes that allow "One time only recording" if they have been recorded to a CPRM compatible disc.<br>● By formatting (➔ page 33) the disc, you can record to it in DVD-Video format and play it on this unit.<br><br>● It may be necessary to finalize the disc on the equipment used for recording. | +RW recorded on another DVD Recorder ※3 |

※3  Play may be impossible on some CD-R, CD-RW, DVD-RW or +RW discs due to the condition of the recording.
※4  You can play still pictures (JPEG/TIFF), CD-DA, Video CD and MP3 format data recorded on 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.

**Regarding DVD-Audio**
Some multi-channel DVD-Audio will prevent down-mixing (➔ page 41) of all or part of their contents if this is the manufacturer's intention. When playing such discs, or such parts of disc, unless the number of connected speakers is the same as the disc's channel specification, audio will not be output properly (e.g. part of the audio is missing, multi-channel audio cannot be selected and audio is played in two channels.) Refer to the disc's jacket for more information.

*Getting started*

| DVD-RW (DVD-Video format)<br>● 4.7 GB, 12 cm<br>● 1.4 GB, 8 cm | +R<br>● 4.7 GB, 12 cm |
|---|---|
| (DVD RW logo) | ——— |
| Before finalizing `-RW(V)` | Before finalizing `+R` |
| After finalizing `DVD-V` | After finalizing `DVD-V` |
| Re-writable discs | One time recording discs<br>(recordable until the disc is full) |
| 8 hours | 8 hours |
| Only after finalizing the disc.<br>(➔ page 33) | Only after finalizing the disc.<br>(➔ page 33) |
| × | × |
| × | × |
| ×<br>Only one is recorded<br>(➔ page 36, Bilingual Audio Selection) | ×<br>Only one is recorded<br>(➔ page 36, Bilingual Audio Selection) |
| ×<br>(The picture is recorded in 4:3 aspect.) | ×<br>(The picture is recorded in 4:3 aspect.) |
| ✓ | ✓ |
| ✓<br>(The available space on DVD-RW (DVD-Video format) increases only when the last recorded title is erased.) ※2 | ✓<br>(Available space does not increase after erasing.) |
| × | × |

※2

| | Erase this to increase the available space. | | | |
|---|---|---|---|---|
| Title 1 | Title 2 | - - - - | The last recorded title | The available space |

The available space does not increase if these are erased.

| Audio CD | | Video CD |
|---|---|---|
| (COMPACT disc DIGITAL AUDIO logo) | ——— | (COMPACT disc DIGITAL VIDEO logo) |
| `CD` | | `VCD` |
| Music and audio recorded (including CD-R/RW ※3 ※4) | CD-R and CD-RW ※3 ※4 with music recorded in MP3<br><br>Still pictures (JPEG and TIFF) recorded on CD-R and CD-RW ※3 ※4 | Music and video recorded (including CD-R/RW ※3 ※4) |

**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.

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**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.
**Use a DVD-RAM to record by the DVD Video Recording format.**

**DVD-Video format**
This recording method is the same as commercially available DVD-Video.
● Digital broadcasts that allow "One time only recording" cannot be recorded.
● These can be played on a DVD player. However programmes recorded on this unit must be finalized to be played on other DVD players.
**Use a DVD-R or DVD-RW to record by the DVD-Video format.**

## Discs that cannot be played

● 2.6 and 5.2 GB DVD-RAM, 12 cm
● 3.95 and 4.7 GB DVD-R for Authoring
● DVD-R recorded by DVD Video Recording format
● DVD-R (DVD-Video format), DVD-RW (DVD-Video format), +R recorded on another unit and not finalized (➔ page 41).
● For Continental Europe and Middle East  DVD-Video with a region number other than "2" or "ALL"
  For Asia  DVD-Video with a region number other than "3" or "ALL"
  For Australia and N.Z.  DVD-Video with a region number other than "4" or "ALL"
● Blu-ray
● DVD-ROM, DVD-R DL, +R DL, +R (8 cm), CD-ROM, CDV, CD-G, Photo CD, CVD, SVCD, SACD, MV-Disc, PD, Divx Video Disc, etc.

## Disc handling

■ **How to hold a disc**
Do not touch the recorded surface.
■ **Concerning non-cartridge discs**
Be careful about scratches and dirt.
■ **If there is dirt or condensation on the disc**
Wipe with a damp cloth and then wipe dry.
■ **Handling precautions**
● Do not attach labels or stickers to discs. (This may cause disc warping and 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 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 (rented 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.

## Types of disc for the type of connected TV

When you use the discs recorded either PAL or NTSC, refer to this table.
(✓ : Possible to view, × : Impossible to view)

| TV type | Disc | Yes/No |
|---|---|---|
| Multi-system TV | PAL | ✓ |
| | NTSC | ✓ ※1 |
| NTSC TV | PAL | × |
| | NTSC | ✓ ※2 |
| PAL TV | PAL | ✓ |
| | NTSC | ✓ ※3 (PAL60) |

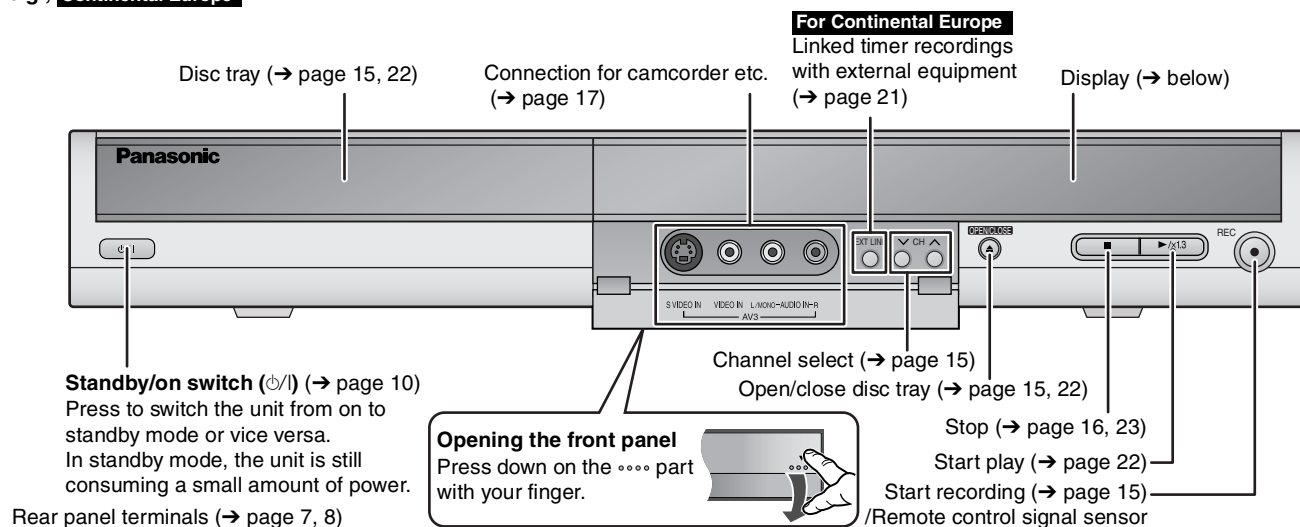※1  If you select "NTSC" in "TV System" (➔ page 39), the picture may be clearer.
※2  Select "NTSC" in "TV System" (➔ page 39).
※3  If your television is not equipped to handle PAL 525/60 signals the picture will not be shown correctly.
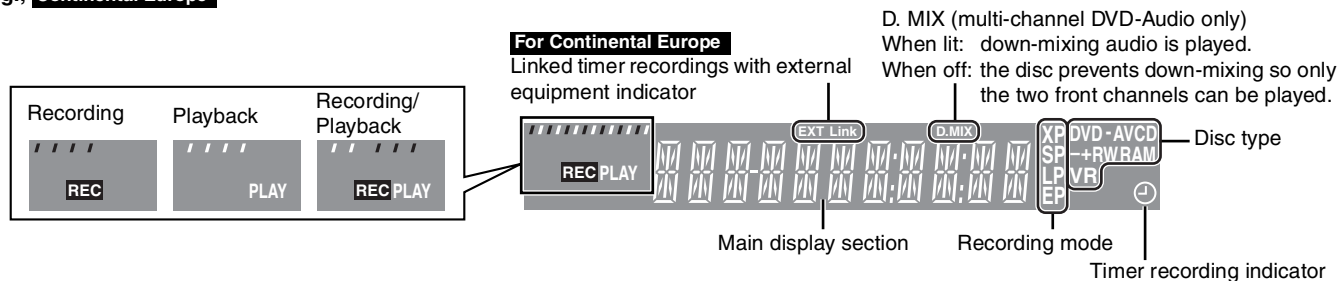
RQT8020

**5**

**ENGLISH**

*Getting started*

## Remote control

e.g., Continental Europe

Turn the unit on (➔ page 10, 12)

**For Continental Europe**
Direct TV recording (➔ page 16)

**For Australia, N.Z., Asia and Middle East**
INPUT SELECT Input select (AV1, AV2, AV3 or AV4)

Select channels and title numbers etc./
Enter numbers

Cancel

Basic operations for recording and play

Show Top menu/Direct Navigator
(➔ page 22, 24, 28)

Show sub menu (➔ page 25, 28, 31)
Show on-screen menu (➔ page 26)
Show timer recording programme screen
(➔ page 20)
Change recording mode (➔ page 15)
Start recording (➔ page 15)
Select Audio (➔ page 22)

**For Continental Europe**
Create chapter (➔ page 23)

Manual tuning operation (➔ page 38)

**For Continental Europe**
Erase items (➔ page 23)

**For Australia, N.Z., Asia and Middle East**
CREATE CHAPTER Create chapter (➔ page 23)
C

Television operations (➔ page 14)

Channel select (➔ page 15)

**For Continental Europe**
Show SHOWVIEW screen (➔ page 18)

**For Australia, N.Z. and Asia**
G-Code Show G-CODE screen (➔ page 19)

Skip 30 seconds forward (➔ page 23)

**For Continental Europe**
Input select (AV1, AV2, AV3 or AV4)

**For Australia, N.Z., Asia and Middle East**
(-/--) Select channels

Show FUNCTIONS window (➔ page 13, 27)

Selection/Enter, Frame-by-frame
(➔ page 10, 12, 23)

Return to previous screen
Show status messages (➔ page 27)
Skip the specified time/Display the television image
as a picture-in-picture (➔ page 16, 23)

**For Continental Europe**
Linked timer recordings with external equipment
(➔ page 21)

**For Australia, N.Z., Asia and Middle East**
ERASE Erase items (➔ page 23)

Programme recording standby/release
(➔ page 18, 19, 20)

Start Flexible Recording (➔ page 17)

**Panasonic**
DVD/TV

## Main unit

e.g., Continental Europe

Disc tray (➔ page 15, 22)

Connection for camcorder etc.
(➔ page 17)

**For Continental Europe**
Linked timer recordings
with external equipment
(➔ page 21)

Display (➔ below)

**Panasonic**

S VIDEO IN   VIDEO IN   L/MONO–AUDIO IN–R
AV3

**Standby/on switch (⏻/l) (➔ page 10)**
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.
Rear panel terminals (➔ page 7, 8)

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

Channel select (➔ page 15)
Open/close disc tray (➔ page 15, 22)

Stop (➔ page 16, 23)
Start play (➔ page 22)
Start recording (➔ page 15)
/Remote control signal sensor

## The unit's display

e.g., Continental Europe

**For Continental Europe**
Linked timer recordings with external
equipment indicator

D. MIX (multi-channel DVD-Audio only)
When lit:   down-mixing audio is played.
When off:  the disc prevents down-mixing so only
           the two front channels can be played.

| Recording | Playback | Recording/Playback |
|---|---|---|
| REC | PLAY | REC PLAY |

REC PLAY   [EXT Link]   [D.MIX]   XP SP LP EP   DVD·AVCD –+RWRAM VR   Disc type

Main display section          Recording mode          Timer recording indicator
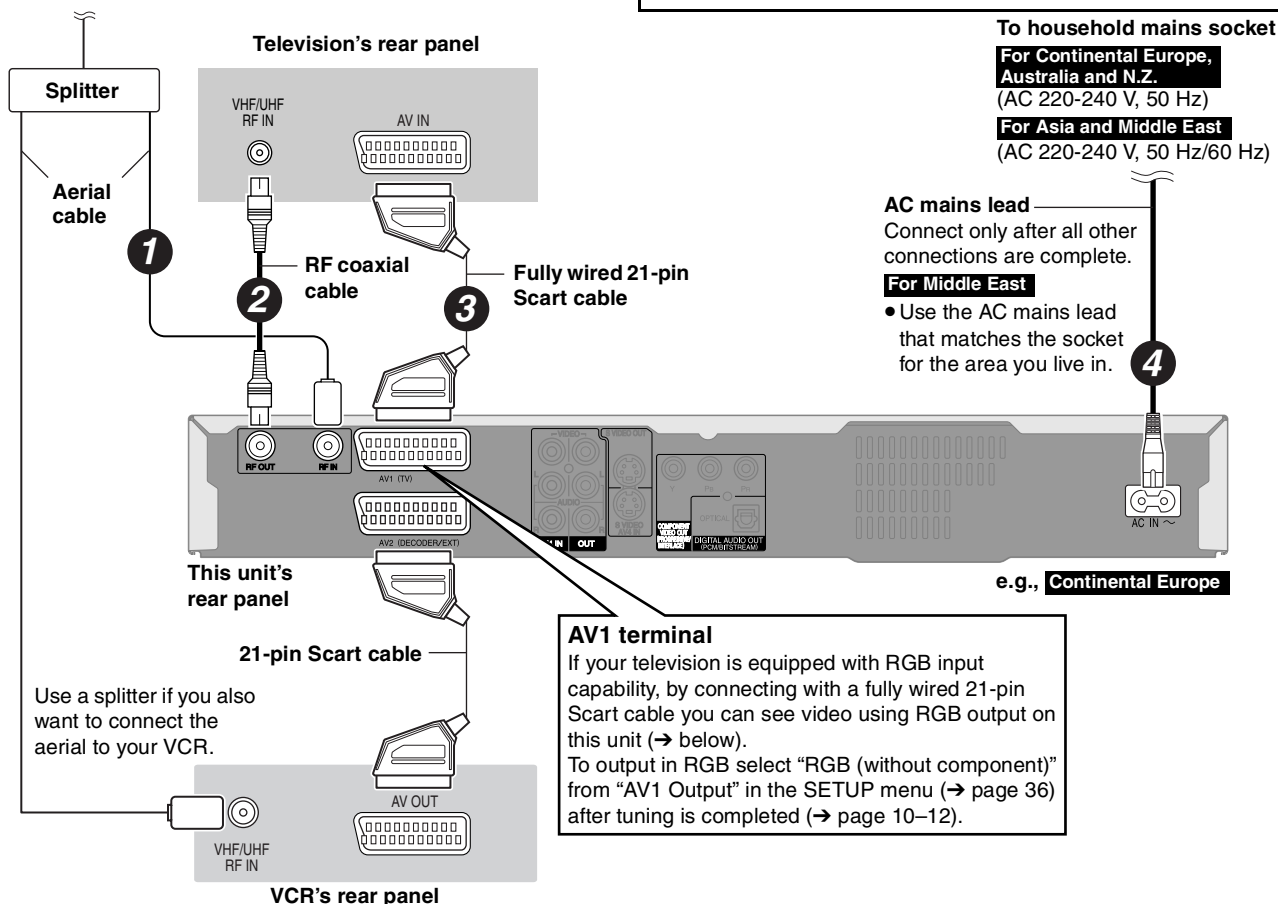
# STEP *1* Connection

- The equipment connections described are examples.
- Before connection, turn off all equipment and read the appropriate operating instructions.
- Peripheral equipment and optional cables are sold separately unless otherwise indicated.

## Connecting a television with 21-pin Scart terminal and VCR

When there is no 21-pin Scart terminal on the television (➔ page 8)

▬▬▬▬ indicates included accessories.

─────── indicates accessories not included.

**❶ — ❹** are required connections. Connect in the numbered order.

**To the aerial**

**Splitter**

**Television's rear panel**

VHF/UHF
RF IN       AV IN

**Aerial cable**

❶

❷  **RF coaxial cable**

❸  **Fully wired 21-pin Scart cable**

RF OUT    RF IN    AV1 (TV)

AV2 (DECODER/EXT)

**This unit's rear panel**

**21-pin Scart cable**

Use a splitter if you also want to connect the aerial to your VCR.

AV OUT

VHF/UHF
RF IN

**VCR's rear panel**

| For Saudi Arabia | BE SURE TO READ THE CAUTION FOR THE AC MAINS LEAD ON PAGE 2 BEFORE CONNECTION. |

**To household mains socket**

| For Continental Europe, Australia and N.Z. |
(AC 220-240 V, 50 Hz)

| For Asia and Middle East |
(AC 220-240 V, 50 Hz/60 Hz)

**AC mains lead** ──────
Connect only after all other connections are complete.

| For Middle East |
- Use the AC mains lead that matches the socket for the area you live in.

❹

AC IN ~

e.g., | Continental Europe |

**AV1 terminal**
If your television is equipped with RGB input capability, by connecting with a fully wired 21-pin Scart cable you can see video using RGB output on this unit (➔ below).
To output in RGB select "RGB (without component)" from "AV1 Output" in the SETUP menu (➔ page 36) after tuning is completed (➔ page 10–12).

### ◼ RGB

This refers to the three primary colours of light, red (R), green (G), and blue (B) and also the method of producing video that uses them. By dividing the video signal into the three colours for transmission, noise is reduced for even higher quality images.

### ◼ Q Link functions | For Continental Europe |

Q Link offers a range of convenient functions (For further details ➔ page 42). Make sure to connect a fully wired 21-pin Scart cable to the television if using the Q Link function.
The following systems from other manufacturers have similar function to Q Link from Panasonic. For details, refer to your television's operating instructions or consult your dealer.

- Q Link (registered trademark of Panasonic)
- DATA LOGIC (registered trademark of Metz)
- Easy Link (registered trademark of Philips)
- Megalogic (registered trademark of Grundig)
- SMARTLINK (registered trademark of Sony)

### ◼ Do not connect the unit through a video cassette recorder

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

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

✔  Television ← This unit ← VCR

✖  Television ← VCR ← This unit
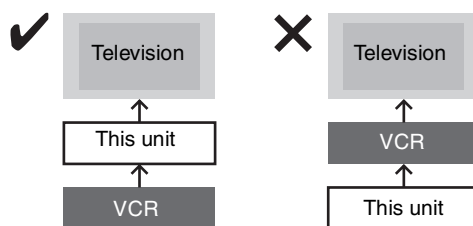
### ◼ When the unit is not to be used for a long time

To save power, unplug it from the household mains socket. This unit consumes a small amount of power, even when it is turned off [approx. 3 W (Power Save mode)].

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

RQT8020

## STEP 1 Connection

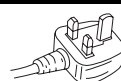### Connecting a television with AUDIO/VIDEO terminals and VCR

Connecting to the television using the 21-pin Scart cables (➔ page 7)
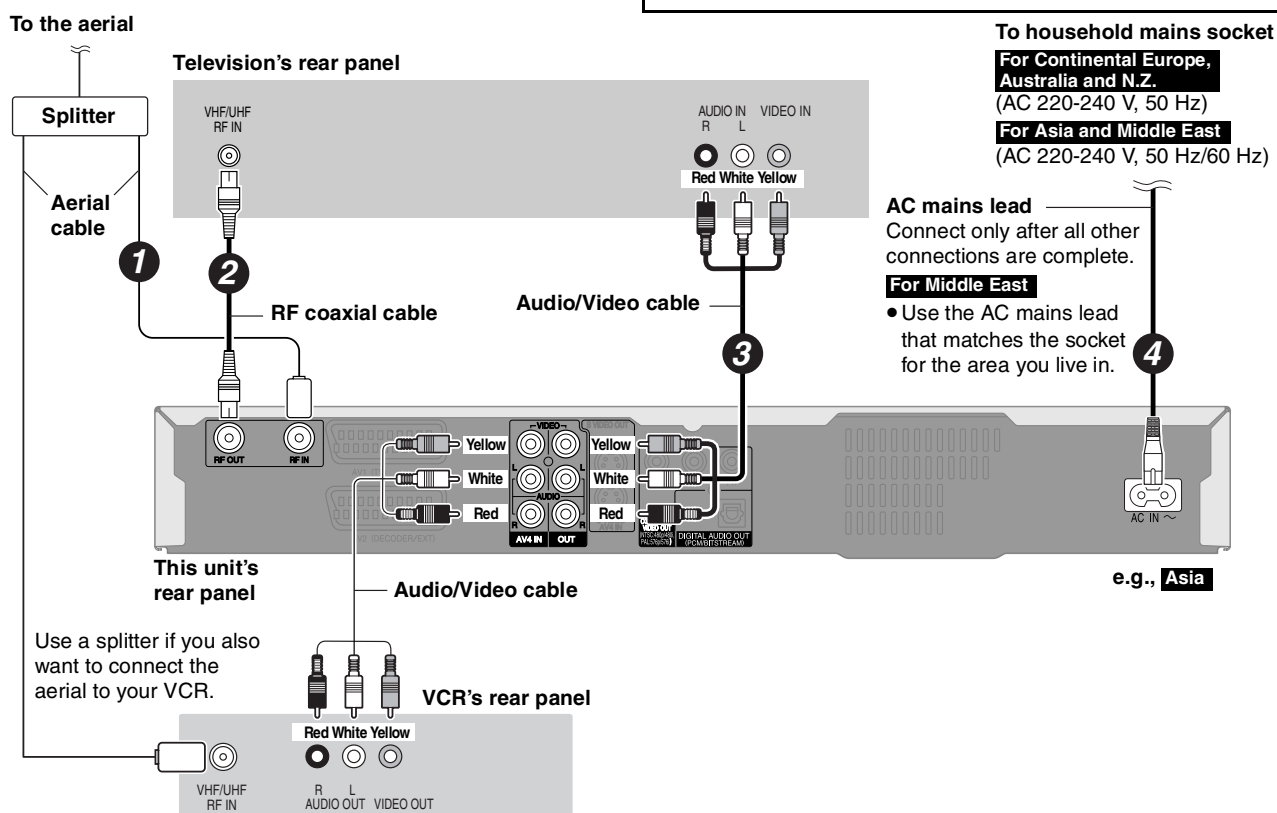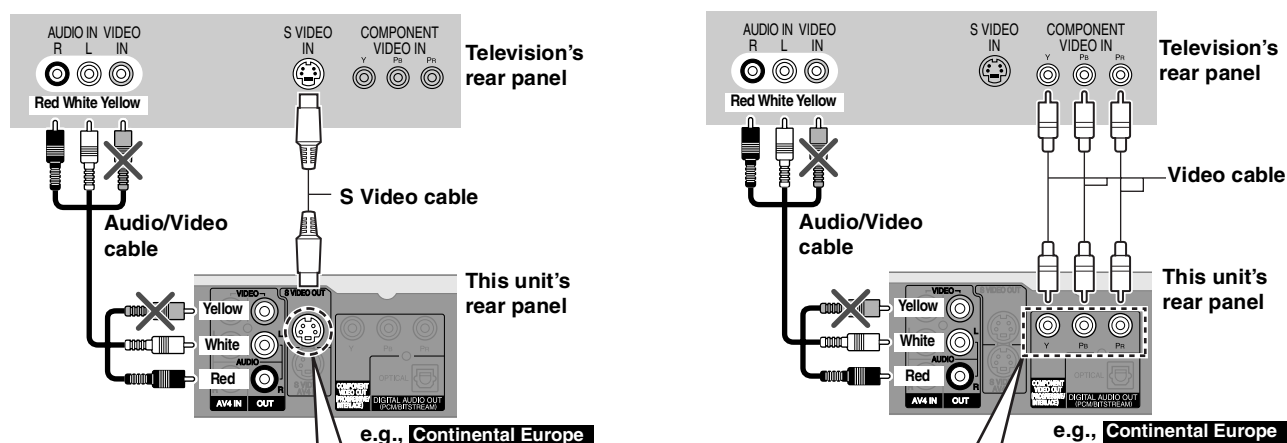
─────── indicates included accessories.
─────── indicates accessories not included.
**1** — **4** are required connections. Connect in the numbered order.

| For Saudi Arabia | BE SURE TO READ THE CAUTION FOR THE AC MAINS LEAD ON PAGE 2 BEFORE CONNECTION. |

**To the aerial**

**Television's rear panel**

VHF/UHF RF IN

AUDIO IN  VIDEO IN
R  L

Red White Yellow

**Splitter**

**Aerial cable**

**To household mains socket**
**For Continental Europe, Australia and N.Z.**
(AC 220-240 V, 50 Hz)
**For Asia and Middle East**
(AC 220-240 V, 50 Hz/60 Hz)

**AC mains lead**
Connect only after all other connections are complete.
**For Middle East**
● Use the AC mains lead that matches the socket for the area you live in.

**1**  **2**

**RF coaxial cable**

**Audio/Video cable**

**3**

**4**

RF OUT  RF IN

Yellow
White
Red

Yellow
White
Red

AV4 IN  OUT  DIGITAL AUDIO OUT (PCM/BITSTREAM)

AC IN ~

**This unit's rear panel**

e.g., Asia

**Audio/Video cable**

Use a splitter if you also want to connect the aerial to your VCR.

**VCR's rear panel**

Red White Yellow

VHF/UHF RF IN

R  L
AUDIO OUT  VIDEO OUT

### Connecting a television with S VIDEO or COMPONENT VIDEO terminals

AUDIO IN  VIDEO
R  L  IN

Red White Yellow

S VIDEO IN

COMPONENT VIDEO IN
Y  PB  PR

**Television's rear panel**

**S Video cable**

**Audio/Video cable**

**This unit's rear panel**

Yellow
White
Red

AV4 IN  OUT  DIGITAL AUDIO OUT (PCM/BITSTREAM)

e.g., Continental Europe

**S VIDEO OUT terminal**
Connect to S VIDEO IN terminal on the television through a S Video cable.
The S VIDEO OUT terminal achieves a more vivid picture than the VIDEO OUT terminal. (Actual results depend on the television.)

AUDIO IN  VIDEO
R  L  IN

Red White Yellow

S VIDEO IN

COMPONENT VIDEO IN
Y  PB  PR

**Television's rear panel**

**Video cable**

**Audio/Video cable**

**This unit's rear panel**

Yellow
White
Red

AV4 IN  OUT  DIGITAL AUDIO OUT (PCM/BITSTREAM)

e.g., Continental Europe

**COMPONENT VIDEO OUT terminal**
Connect to COMPONENT VIDEO IN terminals on the television through a component video cable. These terminals can be used for either interlace or progressive output (➔ page 42) and provide a purer picture than the S VIDEO OUT terminal.
● Connect to terminals of the same colour.

#### ■ Component video output

Component signal outputs the colour difference signals (PB/PR) and luminance signal (Y) separately in order to achieve high fidelity in reproducing colours. If the television is compatible with progressive output, a high quality picture can be output because this unit's component video output terminal outputs a progressive output signal (➔ page 42).

## Connecting a digital/satellite receiver or decoder

≥Decoder here means the device used to decode scrambled broadcasts (Pay TV).
≥Change the "AV2 Input" and "AV2 Connection" settings in the SETUP menu to match the connected equipment (➜ page 36).

AV OUT

**Digital/satellite receiver or decoder's rear panel**

**21-pin Scart cable**

**This unit's rear panel**

AV2 (DECODER/EXT)

**Viewing video from the decoder on the television while the unit is stopped, or while recording**
If you connected the television to the AV1 terminal and the decoder to the AV2 terminal on this unit, press [0]+[ENTER]. ("DVD" appears on the unit's display.) Press again to cancel. ("TV" appears on the unit's display.)
≥If the television is compatible with RGB input, the RGB output signal from the decoder can also be output from the main unit the same way.

## Connecting an amplifier or system component

### ∎ To enjoy multi-channel surround sound on DVD-Video

Connect an amplifier with Dolby Digital, DTS and MPEG decoders using an optical digital audio cable and change the settings in "Digital Audio Output" (➜ page 36).
≥Digital output is not digital with DVD-Audio (figure 1), however you can enjoy it in analogue (figure 2).
(For digital playback, set "DVD-Audio Video mode Playback" (➜ page 35) to "On" when the DVD-Audio contains DVD-Video.)
≥You cannot use DTS Digital Surround decoders not suited to DVD.

**Amplifier's rear panel**

OPTICAL IN

**Optical digital audio cable**
Do not bend this cable sharply.

Insert fully, with this side facing up.

e.g., Continental Europe

**This unit's rear panel**
**(figure 1)**

### ∎ Connection to a stereo amplifier

**Amplifier's rear panel**

AUDIO IN R L

**Red White**

**Audio cable**

**White**
**Red**

AV4 IN   OUT

e.g., Continental Europe

**This unit's rear panel**
**(figure 2)**
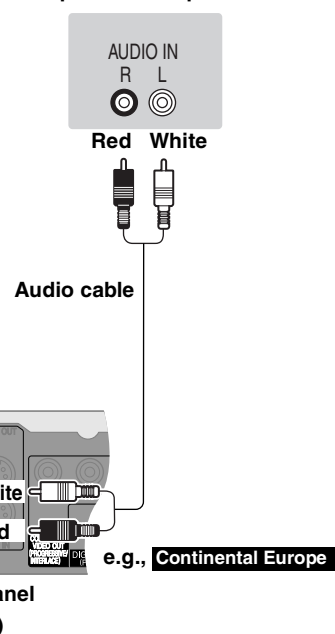
**Do not place the unit on amplifiers or equipment that may become hot.**
The heat can damage the unit.

---

### Note to owners of progressive compatible PAL system televisions
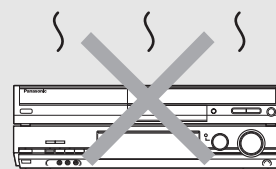
≥**If you have an LCD/plasma television or LCD projector**
Using progressive output, you can enjoy high-resolution video recorded on media such as DVD-Video. Connect this unit's component video output terminals to your television and turn on the progressive output setting (➜ page 13).
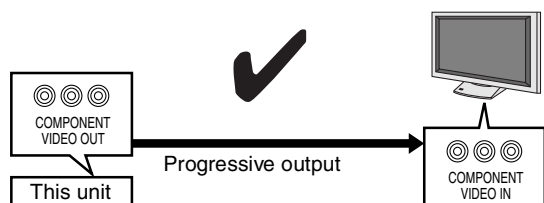
≥**If you have a CRT (cathode ray tube) television**
Use component output with progressive "Off" (Factory setting, ➜ page 36), even if it is progressive compatible, because progressive output can cause some flickering. This is the same for multi system televisions using PAL mode.

COMPONENT VIDEO OUT — This unit — Progressive output — COMPONENT VIDEO IN

COMPONENT VIDEO OUT — This unit — Progressive output — COMPONENT VIDEO IN

RQT8020
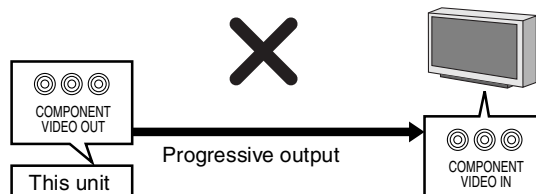
# *STEP 2* TV Tuning

**e.g.,** Continental Europe

○/I                              ∨ **CH** ∧

**e.g.,** Continental Europe

○ **DVD**

**Numbered buttons**

▲, ▼, ◄, ►
**ENTER**

**RETURN**
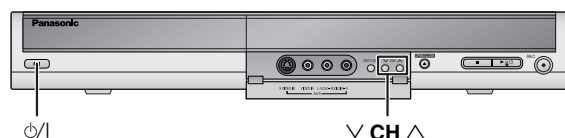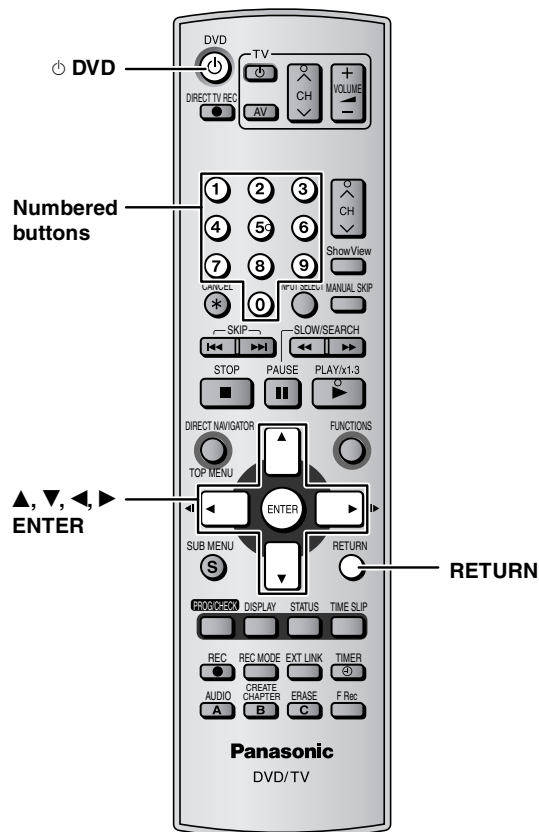
## Tuning Preset Download (Setup with Q Link functions)

**When connecting to a television that has the Q Link function (→ page 42) with a fully wired 21-pin Scart cable (→ page 7).**
(The AV2 and AV4 Scart terminals on Panasonic televisions are compatible with the Q Link function.)

You can download the tuning positions from the television.
This unit Auto Clock Setting function synchronizes the time when the TV channel that is broadcasting time and date information is tuned.

## 1 Turn on the television and select the appropriate AV input to suit the connections to this unit.

## 2 Press [○ DVD] to turn the unit on.
Tuning Preset Downloading starts.

**Download from TV**

Pos    2

Download in progress, please wait.
RETURN: to abort
▷ ▶ ▷

Tuning Preset Downloading is complete when you see the television picture.

● If the Country setting menu appears on the television, press [▲, ▼, ◄, ►] to select the country and press [ENTER].

**Country**

| België | Deutschland |
|--------|-------------|
| Belgique | Österreich |
| Belgien | Portugal |
| Danmark | Suomi |
| España | Sverige |
| Ελλάδα | Schweiz |
| France | Suisse |
| Italia | Svizzera |
| Nederland | Others |
| Norge | |

▣  RETURN: leave  ENTER: access
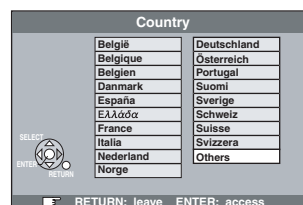
If you select "Schweiz", "Suisse" or "Svizzera" in the Country setting, or when the television tuning setting has been set to Switzerland, the "Power Save" setting menu appears. Select "On" or "Off" (→ page 37).

**To stop partway**
Press [RETURN].

### ■ If the clock setting menu appears
Set the clock manually (→ page 40).

### ■ To confirm that stations have been tuned correctly (→ page 38)

### ■ To restart Preset Download (→ page 39)

For Continental Europe

## Auto-Setup (Setup without Q Link functions)

- When connecting to a television with the VIDEO OUT, S VIDEO OUT or COMPONENT VIDEO OUT terminal (➔ page 8).
- When connecting to a television that does not have the Q Link function (➔ page 42).

This unit's Auto-Setup function automatically tunes all available TV stations and synchronizes the time when the TV channel that is broadcasting time and date information is tuned.

### 1 Turn on the television and select the appropriate AV input to suit the connections to this unit.

### 2 Press [⏻ DVD] to turn the unit on.

The Country setting menu appears.

```
                Country

        België        Deutschland
        Belgique      Österreich
        Belgien       Portugal
        Danmark       Suomi
        España        Sverige
        Ελλάδα        Schweiz
        France        Suisse
        Italia        Svizzera
        Nederland     Others
        Norge

   ▦ RETURN: leave    ENTER: access
```

If you select "Schweiz", "Suisse" or "Svizzera", the "Power Save" setting menu appears. Select "On" or "Off" (➔ page 37).

### 3 Press [▲, ▼, ◄, ►] to select the country.

### 4 Press [ENTER].

Auto-Setup starts. This takes about 8 minutes.

```
        Auto-Setup


      Ch      1


    Auto-Setup in progress, please wait.
    RETURN:  to abort
          ► ▷ ▷
```

Auto-Setup is complete when you see the television picture.

**To stop partway**
Press [RETURN].

### ■ If the clock setting menu appears

Set the clock manually (➔ page 40).

### ■ To confirm that stations have been tuned correctly (➔ page 38)

### ■ To restart Auto-Setup (➔ page 39)

You can also use the following method to restart Auto-Setup.
When the unit is on and stopped
**Press and hold [∨ CH] and [CH ∧] on the main unit until the Country setting screen appears.**

- All the settings except for the ratings level, ratings password and time settings return to the factory preset. The timer recording programmes are also cancelled.

## STEP *2* TV Tuning

*Getting started*

**For Australia and N.Z.**

### Auto-Setup

**When connecting to a television with the corresponding terminal (➔ page 8).**
This unit's Auto-Setup function automatically tunes all available TV stations.
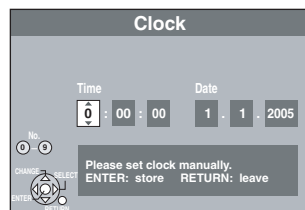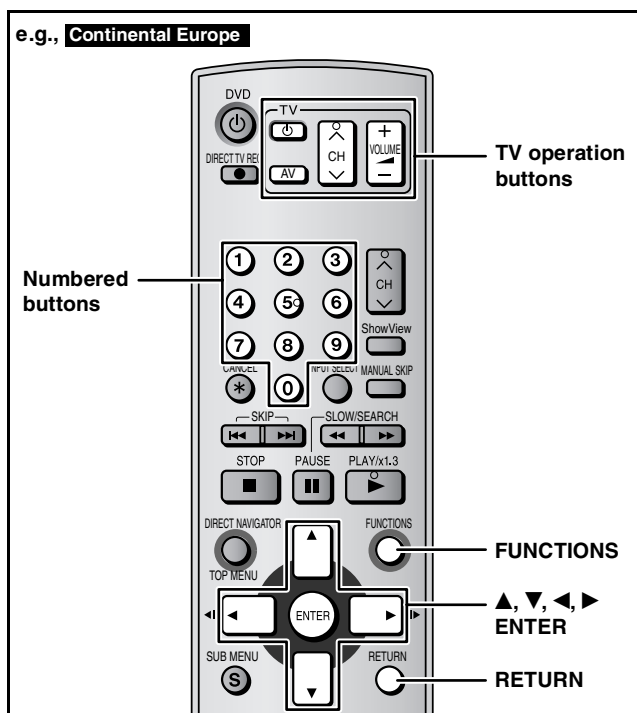
**1  Turn on the television and select the appropriate AV input to suit the connections to this unit.**

**2  Press [⏻ DVD] to turn the unit on.**
The Country setting menu appears on the television.

```
            Country
    Australia
    New Zealand
    Others
```

**3  Press [▲, ▼] to select the country and press [ENTER].**
Auto-Setup starts. This takes about 5 minutes.

```
        Auto-Setup
          128
Auto-Setup in progress, please wait.
RETURN:  to abort
          ▶ ▷ ▷
```

Auto-Setup is complete when you see the clock setting menu.

```
            Clock

  Time              Date
  0 : 00 : 00    1 . 1 . 2005
  No.
  0~9
  CHANGE   SELECT
  ENTER        Please set clock manually.
  RETURN       ENTER: store   RETURN: leave
```

**4  Press [◄, ►] to select the item you want to change.**
This is a 24-hour clock.
The items change as follows:

Hour ⟷ Minute ⟷ Second ⟷ Day ⟷ Month ⟷ Year

Reset the clock regularly to maintain accuracy (➔ page 40). (Monthly accuracy +/– 15 seconds.)

**5  Press [▲, ▼] to change the setting.**
You can also use the numbered buttons for setting.

**6  Press [ENTER] when you have finished the settings.**
The clock starts and the television displays the channel being received.

**To stop partway**
Press [RETURN].

■ **To confirm that stations have been tuned correctly (➔ page 38)**

■ **To restart Auto-Setup (➔ page 39)**
You can also use the following method to restart Auto-Setup.
When the unit is on and stopped
**Press and hold [∨ CH] and [CH ∧] on the main unit until the Country setting screen appears.**

● All the settings except for the ratings level, ratings password and time settings return to the factory preset. The timer recording programmes are also cancelled.

**For Asia and Middle East**

### Auto-Setup

**When connecting to a television with the corresponding terminal (➔ page 8).**
This unit's Auto-Setup function automatically tunes all available TV stations.

**1  Turn on the television and select the appropriate AV input to suit the connections to this unit.**

**2  Press [⏻ DVD] to turn the unit on.**
Auto-Setup starts. This takes about 5 minutes.

```
        Auto-Setup
          128
Auto-Setup in progress, please wait.
RETURN:  to abort
          ▶ ▷ ▷
```

Auto-Setup is complete when you see the clock setting menu.

```
            Clock

  Time              Date
  0 : 00 : 00    1 . 1 . 2005
  No.
  0~9
  CHANGE   SELECT
  ENTER        Please set clock manually.
  RETURN       ENTER: store   RETURN: leave
```

**3  Press [◄, ►] to select the item you want to change.**
This is a 24-hour clock.
The items change as follows:

Hour ⟷ Minute ⟷ Second ⟷ Day ⟷ Month ⟷ Year

Reset the clock regularly to maintain accuracy (➔ page 40). (Monthly accuracy +/– 15 seconds.)

**4  Press [▲, ▼] to change the setting.**
You can also use the numbered buttons for setting.

**5  Press [ENTER] when you have finished the settings.**
The clock starts and the television displays the channel being received.

**To stop partway**
Press [RETURN].

■ **To confirm that stations have been tuned correctly (➔ page 38)**

■ **To restart Auto-Setup (➔ page 39)**
You can also use the following method to restart Auto-Setup.
When the unit is on and stopped
**Press and hold [∨ CH] and [CH ∧] on the main unit until the Auto-Setup screen appears.**

● All the settings except for the ratings level, ratings password and time settings return to the factory preset. The timer recording programmes are also cancelled.

## *STEP 3* Set up to match your television and remote control

**e.g.,** Continental Europe

TV operation buttons

Numbered buttons

FUNCTIONS

▲, ▼, ◀, ▶
ENTER

RETURN

### Selecting television type and aspect

Choose the setting to suit your television and preference.

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

**2** **Press [▲, ▼] to select "To Others" and press [ENTER].**
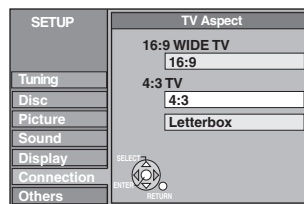
**e.g.,** Continental Europe

FUNCTIONS DVD   No Disc

Playback

Recording   ⊙TIMER RECORDING ⊙SETUP
   ⊙ShowView

   ⊙ ENTER   To Others   Return
   ⊙ RETURN

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

**e.g.,** Continental Europe

SETUP   Manual
   Auto-Setup Restart
   Download from TV
Tuning
Disc
Picture
Sound
Display
Connection
Others

**4** **Press [▲, ▼] to select "Connection" and press [▶].**

**To exit the screen**
Press [RETURN] several times.

**To return to the previous screen**
Press [RETURN].
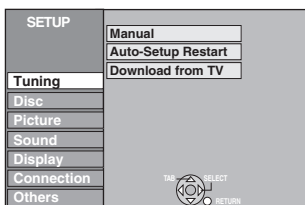
**5** **Press [▲, ▼] to select "TV Aspect" and press [ENTER].**

**6** **Press [▲, ▼] to select the TV aspect and press [ENTER].**

SETUP   TV Aspect
   16:9 WIDE TV
      16:9
Tuning   4:3 TV
Disc      4:3
Picture      Letterbox
Sound
Display
Connection
Others

- **16:9**: 16:9 widescreen television
- **4:3**: 4:3 standard aspect television
   RAM   Even if it records and plays, the aspect does not change.
   DVD-V   Video recorded for a widescreen is played as Pan & Scan (unless prohibited by the producer of the disc) (➔ page 42).
- **Letterbox**: 4:3 standard aspect television
   Widescreen picture is shown in the letterbox style (➔ page 42).

### To enjoy progressive video

You can enjoy progressive video by connecting this unit's COMPONENT VIDEO OUT terminals to an LCD/plasma television or LCD projector compatible with progressive scan (➔ page 42).

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

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

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

**4** **Press [▲, ▼] to select "Connection" and press [▶].**

**5** **Press [▲, ▼] to select "Progressive" and press [ENTER].**

**6** **Press [▲, ▼] to select "On" and press [ENTER].**
Output becomes progressive.

Note

- When connected to a CRT (Cathode ray tube) television, even if it is progressive compatible, progressive output can cause some flickering. Turn off "Progressive" if this occurs (➔ page 27).
- Picture will not be displayed correctly if connected to an incompatible television.
- There is no output from the COMPONENT VIDEO OUT terminals if "AV1 Output" in the SETUP menu is set to "RGB (without component)". Set this item to either "Video (with component)" or "S Video (with component)" (➔ page 36).
- If the unit is connected to the television through VIDEO OUT, S VIDEO OUT or AV1 terminal, output will be interlace irrespective of the settings.

*Getting started*

RQT8020

## Television operation

You can configure the remote control TV operation buttons to turn the television on/off, change the television input mode, select the television channel and change the television volume.

**Point the remote control at the television**

## While pressing [⏻ TV], enter the code with the numbered buttons.

e.g., 01: [0] ➔ [1]

**Manufacturer and Code No.**

**For Continental Europe**

| Brand | Code | Brand | Code |
|-------|------|-------|------|
| Panasonic | 01, 02, 03, 04, 45 | NOKIA | 25, 26, 27 |
| AIWA | 35 | NORDMENDE | 10 |
| AKAI | 27, 30 | ORION | 37 |
| BLAUPUNKT | 09 | PHILIPS | 05, 06 |
| BRANDT | 10, 15 | PHONOLA | 31, 33 |
| BUSH | 05, 06 | PIONEER | 38 |
| CURTIS | 31 | PYE | 05, 06 |
| DESMET | 05, 31, 33 | RADIOLA | 05, 06 |
| DUAL | 05, 06 | SABA | 10 |
| ELEMIS | 31 | SALORA | 26 |
| FERGUSON | 10 | SAMSUNG | 31, 32, 43 |
| GOLDSTAR/LG | 31 | SANSUI | 05, 31, 33 |
| GOODMANS | 05, 06, 31 | SANYO | 21 |
| GRUNDIG | 09 | SBR | 06 |
| HITACHI | 22, 23, 31, 40, 41, 42 | SCHNEIDER | 05, 06, 29, 30, 31 |
| INNO HIT | 34 | SELECO | 06, 25 |
| IRRADIO | 30 | SHARP | 18 |
| ITT | 25 | SIEMENS | 09 |
| JVC | 17, 39 | SINUDYNE | 05, 06, 33 |
| LOEWE | 07 | SONY | 08 |
| METZ | 28, 31 | TELEFUNKEN | 10, 11, 12, 13, 14 |
| MITSUBISHI | 06, 19, 20 | THOMSON | 10, 15, 44 |
| MIVAR | 24 | TOSHIBA | 16 |
| NEC | 36 | WHITE WESTINGHOUSE | 05, 06 |

**Manufacturer and Code No.**

**For Australia, N.Z., Asia and Middle East**

| Brand | Code | Brand | Code |
|-------|------|-------|------|
| Panasonic/ National | 01, 02, 03, 04 | PHILIPS | 12 |
| GOLDSTAR/LG | 15, 16 | SAMSUNG | 12, 17, 18 |
| HITACHI | 08 | SANYO | 14, 19 |
| JVC | 07 | SHARP | 11 |
| MITSUBISHI | 09, 10 | SONY | 05 |
| NEC | 13 | TOSHIBA | 06 |

Test by turning on the television and changing channels. Repeat the procedure until you find the code that allows correct operation.

● If your television brand is not listed or if the code listed for your television does not allow control of your television, this remote control is not compatible with your television.

## When other Panasonic products respond to this remote control

If other Panasonic products are placed close together, change the remote control code on the main unit and the remote control (the two must match).

Under normal circumstances use the factory set code "DVD 1".

**1** While stopped

**Press [FUNCTIONS].**

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

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

**4** **Press [▲, ▼] to select "Others" and press [▶].**

**5** **Press [▲, ▼] to select "Remote Control" and press [ENTER].**

**6** **Press [▲, ▼] to select the code ("DVD 1", "DVD 2" or "DVD 3") and press [ENTER].**

| SETUP | Remote Control |
|-------|----------------|
| Tuning | Press "○" and "ENTER" together for more than 2 seconds on the remote control. |
| Disc | |
| Picture | |
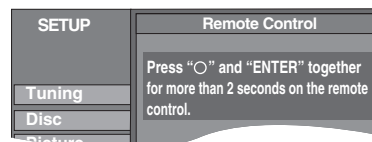
**To change the code on the remote control**

**7** **While pressing [ENTER], press and hold the numbered button ([1], [2] or [3]) for more than 2 seconds.**

**8** **Press [ENTER].**

■ **When the following indicator appears on the unit's display**

REMOTE DV I2

Press and hold [ENTER] and the indicated number button at the same time for more than 2 seconds.

**Note**

Executing "Shipping Condition" in the SETUP menu returns the main unit code to "DVD 1". Change the remote control code to 1 (➔ step 7).

# Recording television programmes

**e.g.,** Continental Europe



**AV3 input terminals**

**e.g.,** Continental Europe



**For Continental Europe**
● **DIRECT TV REC**

**For Australia, N.Z., Asia and Middle East**
**INPUT SELECT**

**Numbered buttons**

**For Continental Europe**
**INPUT SELECT**

**For Australia, N.Z., Asia and Middle East**
**-/--**

**DIRECT NAVIGATOR**

**▲, ▼, ◄, ►**
**ENTER**

**RETURN**
**STATUS**
**TIME SLIP**

**⏱ TIMER**

**AUDIO**
**F Rec**

---
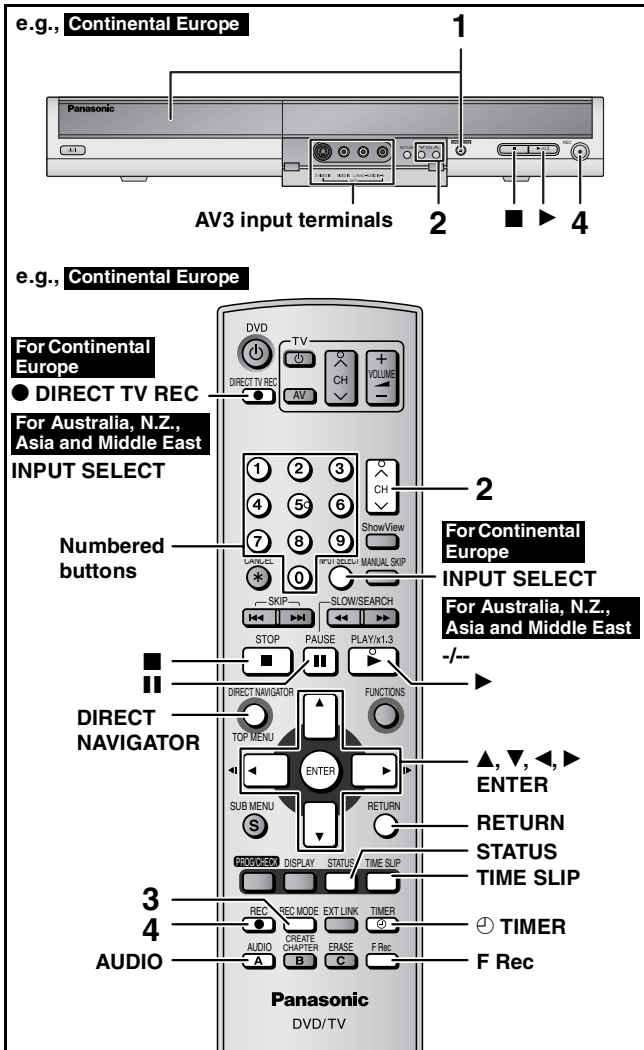
## Recording modes and approximate recording times

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

(Unit: hour)

| Mode | DVD-RAM | | DVD-R DVD-RW +R (4.7 GB) |
|---|---|---|---|
| | Single-sided (4.7 GB) | Double-sided (9.4 GB) | |
| XP (High quality) | 1 | 2 | 1 |
| SP (Normal) | 2 | 4 | 2 |
| LP (Long play) | 4 | 8 | 4 |
| EP (Extra long play) | 8 (6※) | 16 (12※) | 8 (6※) |
| FR (Automatic mode selection) | 8 hours maximum | 8 hours maximum for one side | 8 hours maximum |



Picture quality | Recording time

XP
SP
LP
EP ( 6Hours )※
EP ( 8Hours )
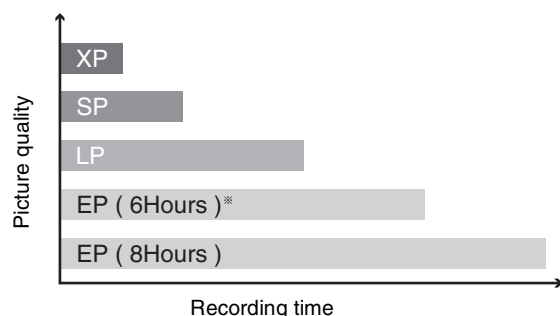
※ When "Recording time in EP Mode" is set to "EP ( 6Hours )" in the SETUP menu.
The sound quality is better when using "EP ( 6Hours )" than when using "EP ( 8Hours )".

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

---

**FR (Flexible Recording) Mode**
The unit automatically selects a recording rate between XP and EP ( 8Hours ) that will enable the recordings to fit in the remaining disc space with the best possible recording quality.
● You can set when programming timer recordings.
● All the recording modes from "XP" to "EP" appear in the display.



## Recording television programmes

RAM -R -RW(V) +R

● It is not possible to record continuously from one side of a double sided disc to the other. You will need to eject the disc and turn it over.
● When using 8 cm DVD-RAM or 8 cm DVD-R, remove the disc from the cartridge.
● You can record up to 99 titles on one disc ( +R 49 titles).
● It is not possible to record digital broadcasts that allow "One time only recording" onto DVD-R, DVD-RW, +R or 8 cm DVD-RAM discs. Use a CPRM compatible DVD-RAM.

**When recording to DVD-R, DVD-RW (DVD-Video format) or +R**
● When recording bilingual TV broadcast onto DVD-R, DVD-RW or +R, only one of either "M 1" or "M 2" audio can be recorded. Select at "Bilingual Audio Selection" (→ page 36).
● The aspect ratio of the recorded images will be 4:3.
● **In order to play a DVD-R, DVD-RW (DVD-Video format) or +R recorded using this unit on another playback source, the disc must first be finalized (→ page 33).**

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

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

● Press the button again to close the tray.

Insert label-up.



Insert with the arrow facing in.
⬆ Insert fully so it clicks into place.
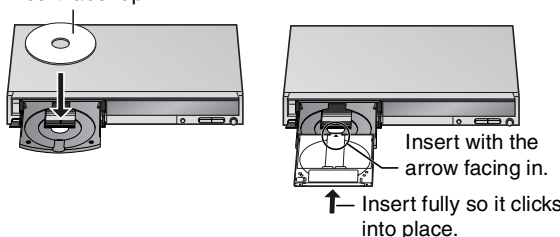
## 2 Press [∧ ∨ CH] to select the channel.



To select with the numbered buttons:
e.g.,

| For Continental Europe | For Australia, N.Z., Asia and Middle East |
|---|---|
| 5: [0] → [5] | 5: [5] |
| 15: [1] → [5] | 15: [-/--] → [1] → [5] |

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



Remaining time on the disc

## 4 Press [● REC] to start recording.



The elapsed time is shown on the display.
Recording will take place on open space on disc. Data will not be overwritten.
● 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.
● RAM You can change the audio being received by pressing [AUDIO] during recording. (This does not affect the actual recording of the audio.)

ENGLISH

*Recording*

### ■ To stop recording
**Press [■].**
From the start to the end of the recording is called one title.

[-R] [-RW(V)] [+R]

It takes about 30 seconds for the unit to complete recording management information after recording finishes.

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

| Quick Start |
| --- |

The Quick Start feature enables this unit to start recording to a DVD-RAM that is already inserted soon after turning it on.
It is set to "On" at the time of purchase (➔ page 37).

| Note |
| --- |

Startup takes more time when:
– You play a disc or start recording to discs other than DVD-RAM.
– The clock has not been set.

| To specify a time to stop recording—One Touch Recording |
| --- |

**During recording**
**Press [● REC] on the main unit to select the recording time.**
Each time you press the button:

30 (min.) ⟶ 60 (min.) ⟶ 90 (min.) ⟶ 120 (min.)
⌐ Counter (cancel) ⟵ 240 (min.) ⟵ 180 (min.) ⟵┘

≥This does not work during timer recordings (➔ page 18) or while using Flexible Recording (➔ page 17).

| If a station also broadcasts Teletext information |
| --- |

The unit automatically records the programme's and station's name if the station's Title Page is correctly set (➔ page 38).

| Note |
| --- |

The unit may take some time in retrieving titles (up to 30 minutes) and may fail in some cases.

| When the format confirmation screen is displayed |
| --- |

When you insert a new DVD-RW or a DVD-RAM or DVD-RW (DVD-Video format) recorded on a computer or other equipment, a format confirmation screen is displayed. Format the disc to use it. However all the recorded contents are erased.

```
            Format
This disc is not formatted properly.
Format the disc in DISC MANAGEMENT ?

    Yes              No

    SELECT
    ENTER      RETURN
```
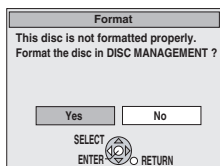
**Press [◄] to select "Yes" and press [ENTER].**

### ■ To format a disc
(Several steps are necessary to format a disc.)
"Erasing all the contents of a disc–Format Disc" (➔ page 33)

## Direct TV Recording

**When connected to a television that has the Q Link function using a fully wired 21-pin Scart cable (➔ page 7).**
This function allows you to immediately start recording the programme that you are viewing on the TV.

**1 Insert a disc. (➔ page 15)**

**2 Press and hold [● DIRECT TV REC] for 1 second.**
Recording starts.

**To stop recording**
Press [■].

## Playing while you are recording

[RAM]

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

## Press [►] (PLAY) during recording.

| 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 exit the Direct Navigator screen**
Press [DIRECT NAVIGATOR].

| Reviewing the recorded images while recording—Time Slip |
| --- |

**1 Press [TIME SLIP] during recording.**
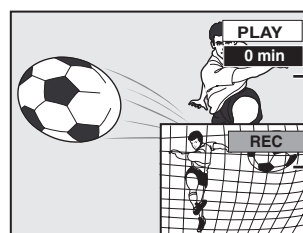
```
           PLAY
           0 min        Play starts from 30
                        seconds previous.

           REC          The current recording
                        images
```

≥You will hear the playback audio.

**2 Press [▲, ▼] to select the time and press [ENTER].**
≥Press [TIME SLIP] to show the play images in full. Press again to show the play and recording images.

### ■ To stop play
**Press [■].**

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

### ■ To stop timer recording
**Press [◷ TIMER].**
≥You can also press and hold [■] on the main unit for more than 3 seconds to stop recording.

## Flexible Recording

RAM   -R   -RW(V)   +R

The unit sets the best possible picture quality that fits the recording within the remaining disc space.

**Preparation**
≥Select the channel to record or the external input.

### 1 While stopped
### Press [F Rec].
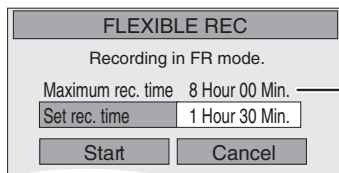
```
      FLEXIBLE REC
    Recording in FR mode.
 Maximum rec. time   8 Hour 00 Min.        ⟵ Maximum recording
 Set rec. time       1 Hour 30 Min.           time
                                              This is the maximum
     Start            Cancel                  recording time in EP
                                              mode.
```

### 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.

### 3 When you want to start recording
### Press [▲, ▼, ◄, ►] to select "Start" and press [ENTER].
Recording starts.
≥All the recording modes from XP to EP appear in the display.

```
XP DVD–
SP        RAM
LP
EP
```

---

**To exit the screen without recording**
Press [RETURN].

**To stop recording partway**
Press [∎].

**To show the recording time**
Press [STATUS].

**e.g., DVD-RAM**

```
 DVD-RAM
 REC 59    ⟵ Recording
 ARD          time

  L R
```
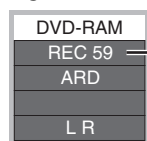
Note

For Continental Europe

When performing EXT LINK recording (➔ page 21), the flexible recording function does not work.

---

**Using "Flexible Recording" is convenient in these kind 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 programme with the best picture quality possible

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

| XP mode |
|---|
| If you select XP mode, the programme will not fit one disc. |



If you try to record a 90 minutes programme in XP mode, only the first 60 minutes will fit on the disc and the 30 minutes balance will not get recorded.

another disc is necessary

| SP mode |
|---|
| If you select SP mode, the programme will fit one disc. |



However there will be 30 minutes remaining disc space.

| FLEXIBLE REC |
|---|
| If you select "FLEXIBLE REC", the programme will fit one disc perfectly. |



▨ : necessary space for recording

---

## Recording from an external equipment

RAM   -R   -RW(V)   +R

**Preparation**
≥Connect a video cassette recorder, etc. to this unit's input terminals.
≥When recording bilingual programmes
  RAM When both M 1 and M 2 is selected on the connected equipment, you can select the audio type in playback.
  -R  -RW(V)  +R Select either M 1 or M 2 on the connected equipment. (The selected audio only is recorded.)
≥When the output signal from the external equipment is NTSC, change the "TV System" to "NTSC" in the SETUP menu (➔ page 39).
≥To reduce noise in input from external equipment (e.g., video casette recorder), set "AV-in NR" to "On" (➔ page 27).
≥Check the time on the unit is correct.

**e.g., Connecting other video equipment to the AV3 input terminals**



**This unit**            **e.g., Continental Europe**

Yellow White Red

**S Video cable**※                          **Audio/Video cable**

**Other video equipment**
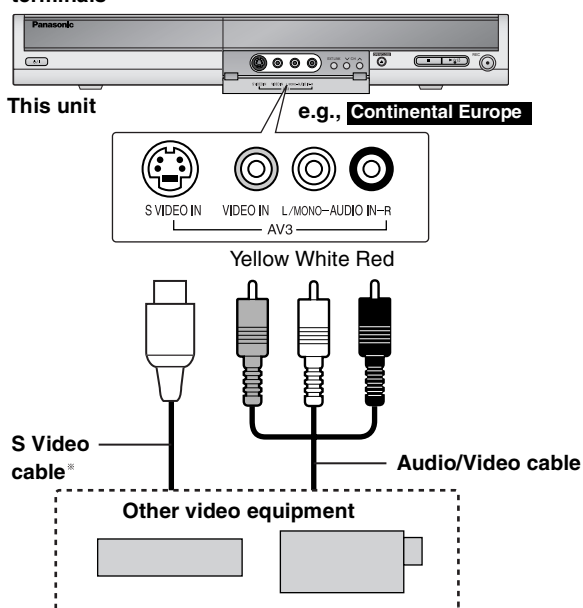
If the audio output of the other equipment is monaural, connect to L/MONO.
※ The S VIDEO terminal achieves a more vivid picture than the VIDEO terminal.

### 1 While stopped
### Press [INPUT SELECT] to select the input channel for the equipment you have connected.

### 2 Press [REC MODE] to select the recording mode.

### 3 Start play on the other equipment.

### 4 Press [● REC].
Recording starts.

---

**To skip unwanted parts**
Press [❚❚] to pause recording. (Press again to restart recording.)

**To stop recording**
Press [∎].

**To record programmes to fill up the remaining space on the disc**
➔ Left, Flexible Recording

**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.**

# Timer recording

e.g., **Continental Europe**
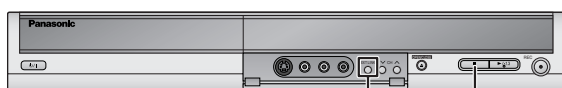
**For Continental Europe**
**EXT LINK**

e.g., **Continental Europe**
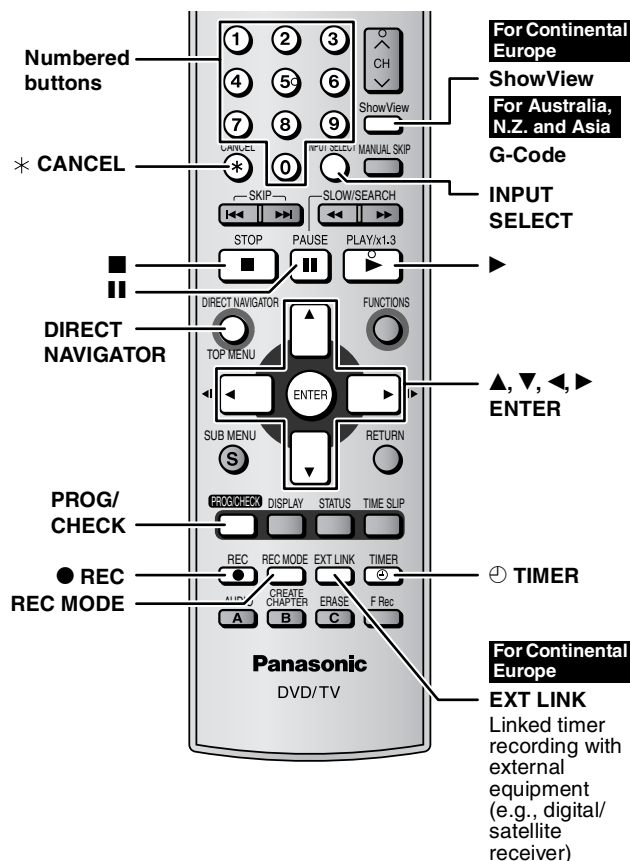
**Numbered buttons**

**For Continental Europe**
**ShowView**
**For Australia, N.Z. and Asia**
**G-Code**

**∗ CANCEL**

**INPUT SELECT**

**■ STOP**
**II PAUSE**
**▶ PLAY/x1.3**

**DIRECT NAVIGATOR**

**▲, ▼, ◀, ▶ ENTER**

**PROG/ CHECK**

**● REC**
**REC MODE**

**⏱ TIMER**

**For Continental Europe**
**EXT LINK**
Linked timer recording with external equipment (e.g., digital/ satellite receiver)

**Panasonic**
**DVD/ TV**

**RAM** **-R** **-RW(V)** **+R**
You can enter up to 16 programmes up to a month in advance.

**Preparation**
● Turn on the television and select the appropriate video input to suit the connections to this unit.
● Check the time on the unit is correct.

**For Continental Europe**

## Using SHOWVIEW system to make timer recordings

Entering SHOWVIEW numbers is an easy way of timer recording. You can find these numbers in TV listings in newspapers and magazines.

## 1 Press [ShowView].

ShowView                   Remain  1:58  SP
                                    12:53:00  15. 7.  TUE

[ - - - - - - - - - ]
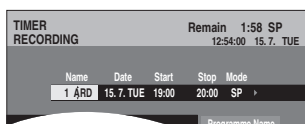
Enter ShowView Number by using 0-9 key.
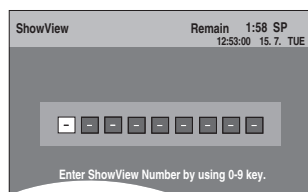
## 2 Press the numbered buttons to enter the SHOWVIEW number.
● **To correct the number**
Press [◀] to move back to correct a digit.
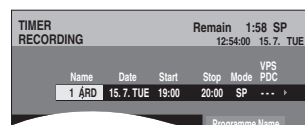
## 3 Press [ENTER].

TIMER                          Remain  1:58  SP
RECORDING                      12:54:00  15. 7.  TUE
                                          VPS
Name    Date       Start   Stop  Mode  PDC
1 ÁRD   15. 7. TUE  19:00   20:00  SP    - - -  ▶
                            Programme Name
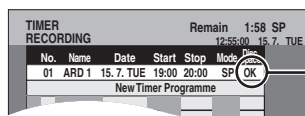
● Confirm the programme and make corrections if necessary using [▲, ▼, ◀, ▶] (→ page 20, Manually programming timer recordings, step 3).
● When "-- -----" appears in the "Name" column, you cannot set timer recording. Press [▲, ▼] to select desired programme position. After you have entered the information of a TV station, it is kept in the unit's memory.
● You can also press [REC MODE] to change the recording mode.
● **VPS/PDC** (→ below)
ON←→OFF (---)
● **Programme Name**
Press [◀, ▶] to select "Programme Name" and press [ENTER] (→ page 34).

## 4 Press [ENTER].

The settings are stored.

TIMER                          Remain  1:58  SP
RECORDING                      12:55:00  15. 7.  TUE
                                     VPS   Disc
No.  Name    Date       Start  Stop  Mode  PDC
01   ARD 1   15. 7. TUE  19:00  20:00  SP   - - -   OK
            New Timer Programme

Check to make sure "OK" is displayed.

Repeat steps 1–4 to programme other recordings.

## 5 Press [⏱ TIMER].

The unit turns off and "⏱" lights on the unit's display to indicate timer recording standby has been activated.

**RAM**
Even if the unit is in timer recording standby, play starts when you press [▶] (PLAY) or [DIRECT NAVIGATOR]. Timer recording works even during play.

■ **To release the unit from recording standby**
**Press [⏱ TIMER].**
The unit turns on and "⏱" goes out.
● Be sure to press [⏱ TIMER] before the programme start time to put the unit on recording standby. Timer recording will work only if "⏱" is displayed.

■ **To cancel recording when recording has already begun**
**Press [⏱ TIMER].**
● You can also press and hold [■] on the main unit for more than 3 seconds to stop recording.

**Note**
● "⏱" flashes for about 5 seconds when the unit cannot go to timer recording standby (e.g., a recordable disc is not in the disc tray).
● If the unit is not put in the timer recording standby mode at the latest 10 minutes before the programmed timer recording starting time, the "⏱" flashes on the unit display. In this case, press [⏱ TIMER] to put the unit in the timer recording standby mode.
● When you programme successive timer recordings to start immediately one after the other, the unit cannot record the part at the beginning of the later programmes (a few seconds when recording with DVD-RAM and approximately 30 seconds when recording with DVD-R, DVD-RW (DVD-Video format) and +R).

■ **VPS/PDC function (→ page 42)**
As long as a VPS/PDC signal is being broadcast by the TV station, even if the broadcast programme time changes, the recording time automatically changes to match the new broadcast time.

**To activate the VPS/PDC function**
In step 3 in the VPS/PDC column, press [▲, ▼] to select "ON".

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

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

**Preparation**
≥Turn on the television and select the appropriate video input to suit the connections to this unit.
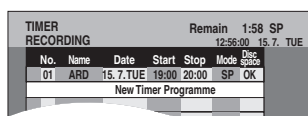≥Check the time on the unit is correct.

For Australia, N.Z. and Asia

## Using G-CODE system to make timer recordings

Entering G-CODE numbers is an easy way of timer recording. You can find these numbers in TV listings in newspapers and magazines.

## 1 Press [G-Code].

```
G-Code                          Remain    1:58  SP
                                  12:53:00   15. 7.  TUE




        -  -  -  -  -  -  -  -

        Enter G-Code Number by using 0-9 key.
```
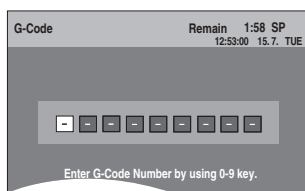
## 2 Press the numbered buttons to enter the G-CODE number.

≥**To correct the number**
Press [◀] to move back to correct a digit.

## 3 Press [ENTER].

```
TIMER                          Remain    1:58  SP
RECORDING                        12:54:00   15. 7.  TUE

   Name     Date     Start  Stop  Mode
 1 ÁRD   15. 7. TUE  19:00  20:00  SP   ▶

                                    Programme Name
```

≥Confirm the programme and make corrections if necessary using [▲, ▼, ◀, ▶] (➔ page 20, Manually programming timer recordings, step 3).
≥When "-- -----" appears in the "Name" column, you cannot set timer recording. Press [▲, ▼] to select desired programme position. After you have entered the information of a TV station, it is kept in the unit's memory.
≥You can also press [REC MODE] to change the recording mode.
≥**Programme Name**
Press [◀, ▶] to select "Programme Name" and press [ENTER] (➔ page 34).

## 4 Press [ENTER].

The settings are stored.

```
TIMER                          Remain    1:58  SP
RECORDING                        12:55:00   15. 7.  TUE
 No.   Name     Date     Start  Stop  Mode Prog
 01   ARD 1  15. 7. TUE  19:00 20:00   SP  OK
            New Timer Programme
```
Check to make sure "OK" is displayed.

Repeat steps 1–4 to programme other recordings.

## 5 Press [☼ TIMER].

The unit turns off and "☼" lights on the unit's display to indicate timer recording standby has been activated.

`RAM`

Even if the unit is in timer recording standby, play starts when you press [▶] (PLAY) or [DIRECT NAVIGATOR]. Timer recording works even during play.

---

■ **To release the unit from recording standby**
**Press [☼ TIMER].**
The unit turns on and "☼" goes out.
≥Be sure to press [☼ TIMER] before the programme start time to put the unit on recording standby. Timer recording will work only if "☼" is displayed.

■ **To cancel recording when recording has already begun**
**Press [☼ TIMER].**
≥You can also press and hold [■] on the main unit for more than 3 seconds to stop recording.

Note
≥"☼" flashes for about 5 seconds when the unit cannot go to timer recording standby (e.g., a recordable disc is not in the disc tray).
≥If the unit is not put in the timer recording standby mode at the latest 10 minutes before the programmed timer recording starting time, the "☼" flashes on the unit display. In this case, press [☼ TIMER] to put the unit in the timer recording standby mode.
≥When you programme successive timer recordings to start immediately one after the other, the unit cannot record the part at the beginning of the later programmes (a few seconds when recording with DVD-RAM and approximately 30 seconds when recording with DVD-R, DVD-RW (DVD-Video format) and +R).

**Refer to the control reference on page 18.**

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

**Preparation**
- Turn on the television and select the appropriate video input to suit the connections to this unit.
- Check the time on the unit is correct.

## Manually programming timer recordings

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

### 1  Press [PROG/CHECK].

**For Continental Europe**

```
TIMER                          Remain   1:58 SP
RECORDING               12:56:00  15. 7. TUE
No.  Name     Date    Start  Stop  Mode  VPS  Disc
                                         PDC  space
01   ARD   15. 7.TUE  19:00  20:00  SP   ---  OK
          New Timer Programme
```

**For Australia, N.Z., Asia and Middle East**

```
TIMER                          Remain   1:58 SP
RECORDING               12:56:00  15. 7. TUE
No.  Name     Date    Start  Stop  Mode  Disc
                                         space
01   ARD   15. 7.TUE  19:00  20:00  SP   OK
          New Timer Programme
```

### 2  Press [▲, ▼] to select "New Timer Programme" and press [ENTER].

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

**For Continental Europe**

```
TIMER                          Remain   1:58 SP
RECORDING               12:57:00  15. 7. TUE
     Name     Date    Start  Stop  Mode  VPS
                                         PDC
1 ARD   15. 7. TUE  19:00  20:00  SP   ---
                              Programme Name
```

**For Australia, N.Z., Asia and Middle East**

```
TIMER                          Remain   1:58 SP
RECORDING               12:57:00  15. 7. TUE
     Name     Date    Start  Stop  Mode
1 ARD   15. 7. TUE  19:00  20:00  SP   ▶
                              Programme Name
```
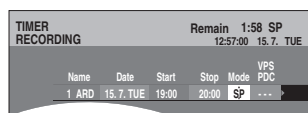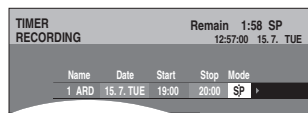
- Press and hold [▲, ▼] to alter Start (Start time) and Stop (Finish time) in 30-minute increments.
- You can also set Name (Programme position/TV Station Name), Date, Start (Start time), and Stop (Finish time) with the numbered buttons.
- You can also press [REC MODE] to change the recording mode.
- **Date**

```
→ Date:          Current date up to one month later minus
↓↑                one day

  Daily timer:   SUN-SAT→MON-SAT→MON-FRI
↓↑

└→ Weekly timer: SUN→----→SAT
```

**For Continental Europe**
- **VPS/PDC** (→ page 18)
  ON←→OFF (---)
- **Programme Name**
  Press [◀, ▶] to select "Programme Name" and press [ENTER] (→ page 34).

### 4  Press [ENTER].

**For Continental Europe**
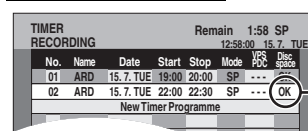
```
TIMER                          Remain   1:58 SP
RECORDING               12:58:00  15. 7. TUE
No.  Name     Date    Start  Stop  Mode  VPS  Disc
                                         PDC  space
01   ARD   15. 7. TUE  19:00  20:00  SP  ---
02   ARD   15. 7. TUE  22:00  22:30  SP  ---  OK
          New Timer Programme
```
Check to make sure "OK" is displayed.

**For Australia, N.Z., Asia and Middle East**
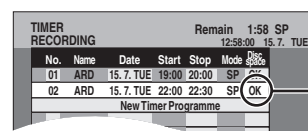
```
TIMER                          Remain   1:58 SP
RECORDING               12:58:00  15. 7. TUE
No.  Name     Date    Start  Stop  Mode  Disc
                                         space
01   ARD   15. 7. TUE  19:00  20:00  SP
02   ARD   15. 7. TUE  22:00  22:30  SP   OK
          New Timer Programme
```
Check to make sure "OK" is displayed.

Repeat steps 2–4 to programme other recordings.

### 5  Press [⏱ TIMER].

The unit turns off and "⏱" lights on the unit's display to indicate timer recording standby has been activated.

`RAM`
Even if the unit is in timer recording standby, play starts when you press [▶] (PLAY) or [DIRECT NAVIGATOR]. Timer recording works even during play.

#### ■ To release the unit from recording standby
**Press [⏱ TIMER].**
The unit turns on and "⏱" goes out.
- Be sure to press [⏱ TIMER] before the programme start time to put the unit on recording standby. Timer recording will work only if "⏱" is displayed.

#### ■ To cancel recording when recording has already begun
**Press [⏱ TIMER].**
- You can also press and hold [■] on the main unit for more than 3 seconds to stop recording.

**Note**
- "⏱" flashes for about 5 seconds when the unit cannot go to timer recording standby (e.g., a recordable disc is not in the disc tray).
- If the unit is not put in the timer recording standby mode at the latest 10 minutes before the programmed timer recording starting time, the "⏱" flashes on the unit display. In this case, press [⏱ TIMER] to put the unit in the timer recording standby mode.
- When you programme successive timer recordings to start immediately one after the other, the unit cannot record the part at the beginning of the later programmes (a few seconds when recording with DVD-RAM and approximately 30 seconds when recording with DVD-R, DVD-RW (DVD-Video format) and +R).

**For Continental Europe**

## Recording from digital/satellite receiver or decoder

**Preparation**
- Connect a digital/satellite receiver or decoder to this unit's input terminals (→ page 9).
- When recording bilingual programmes

`RAM`
When both M 1 and M 2 is selected on the connected equipment, you can select the audio type in playback.

`-R` `-RW(V)` `+R`
Select either M 1 and M 2 on the connected equipment. (The selected audio only is recorded.)
- When the output signal from the external equipment is NTSC, change the "TV System" to "NTSC" in the SETUP menu (→ page 39).

### 1  While stopped

**Press [INPUT SELECT] to select the input channel for the equipment you have connected.**
e.g., If you have connected to AV2 input terminals, select "A2".

### 2  Press [REC MODE] to select the recording mode.

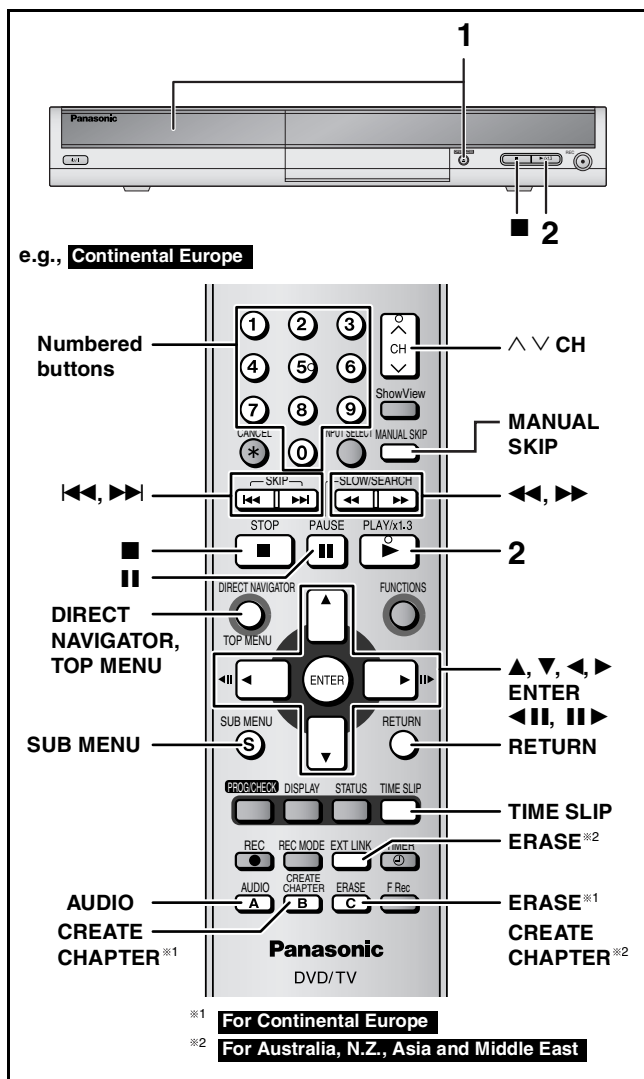### 3  Select the channel on the other equipment.

### 4  Press [● REC].
Recording starts.

**To skip unwanted parts**
Press [❚❚] to pause recording. (Press again to restart recording.)

**To stop recording**
Press [■].

## Check, change or delete a programme

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

Even when the unit is turned off, you can display the timer recording list by pressing [PROG/CHECK].

## Press [PROG/CHECK].

**Icons**
● This programme is currently recording.
Ⓦ The times overlap those in another programme. Recording of the programme with the later start time starts when the earlier programme finishes recording.
ⓕ The disc was full so the programme failed to record.
▨ The material was copy-protected so it was not recorded.
Ⓧ The programme did not complete recording because the disc is dirty or some other reason.

e.g., Continental Europe

| TIMER RECORDING | | | | | Remain 1:58 SP 12:56:00 15. 7. TUE | | |
|---|---|---|---|---|---|---|---|
| No. | Name | Date | Start | Stop | Mode | VPS PDC | Disc space |
| 01 | ARD | 15. 7.TUE | 19:00 | 20:00 | SP | - - - | OK |
| | New Timer Programme | | | | | | |

**Message displayed in the "Disc space" 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:
- the disc is write-protected
- there is no more space left
- the number of possible titles has reached its maximum.

### ■ To change a programme
Press [▲, ▼] to select the programme and press [ENTER].
(→ page 20, Manually programming timer recordings, step 3)

### ■ To delete a programme
Press [▲, ▼] to select the programme and press [✳ CANCEL].

### ■ To exit the timer recording list
Press [PROG/CHECK].

### ■ To put the unit on timer recording standby
Press [⏲ TIMER].
The unit turns off and "⏲" lights on the unit's display to indicate timer recording standby has been activated.

- Programmes that failed to record are deleted from the timer recording list at 4 a.m. two days later.

For Continental Europe

## Making timer recordings on the television
### (e.g., of digital broadcasts)

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

To make a timer recording with your television, connect to a television with a Q Link function (→ page 42) that you can use for setting timer recordings using a fully wired 21-pin Scart cable (→ page 7).

1 **Make timer programming on the TV.**
2 **Insert a disc.**
3 **Turn off the unit.**
   The start and end of recording is controlled by TV.

**To stop recording**
Press [■].

**Note**
- When this unit is in timer recording standby or EXT LINK standby ("⏲" or "EXT Link" on the unit's display), recording from TV does not start.
- Programmes are recorded as one title on this unit when the end time of the earlier timer recording and the start time of the later timer recording are close to each other.
  `RAM` To divide the titles, go to "Divide Title" (→ page 29).

For Continental Europe

## Linked timer recordings with external equipment (digital/satellite receiver)– EXT LINK

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

To record programmes from a digital/satellite receiver using timer programming

**Preparation**
- Make sure you connect the AV2 input terminal of this unit to "VCR Scart Terminal" of a digital/satellite receiver with a 21-pin scart cable (→ page 9).
- Set the "AV2 Input" to match the connected equipment in the SETUP menu (→ page 36).
- Set the "Ext Link" to match the connected equipment in the SETUP menu (→ page 36).
  Ext Link 1: Start and stop timings of recording are controlled by the control signal from a digital/satellite receiver.
  Ext Link 2: When an external equipment with a timer function turns on, recording starts.
  When it turns off, recording stops.

1 **Make timer programming on the external equipment.**
2 **Insert a disc.**
3 **Press [EXT LINK].**
   The unit turns off and "EXT Link" lights on the unit's display to indicate timer recording standby has been activated.

**To cancel the external control**
Press [EXT LINK] to stop recording or to cancel linked timer recording standby.
- In order to prevent accidental operation, press [EXT LINK] to cancel the setting after recording is finished.

**For your reference**
- This function does not work with some equipment. Refer to the equipment's operating instructions.
- The beginnings of recordings may not be recorded correctly in some cases.
- When "Ext Link" is set to "Ext Link 2", this function does not work if the input signal is NTSC system.
- When "AV2 Connection" is set to "Decoder", EXT LINK is not available (→ page 36).
- Programmes are recorded as one title on this unit when the end time of the earlier timer recording and the start time of the later timer recording are close to each other.
  `RAM` To divide the titles, go to "Divide Title" (→ page 29).
- While the unit is in EXT LINK standby mode or recording, video picture is from the AV2 input terminal irrespective of "AV1 Output" setting.

RQT8020

**1**

Panasonic

■ **2**

e.g., Continental Europe

Numbered buttons

∧ ∨ CH

ShowView

MANUAL SKIP

CANCEL

INPUT SELECT

|◀◀, ▶▶|

SKIP

SLOW/SEARCH

◀◀, ▶▶

■

STOP   PAUSE   PLAY/x1.3

**2**

II

DIRECT NAVIGATOR, TOP MENU

DIRECT NAVIGATOR   FUNCTIONS

TOP MENU

▲, ▼, ◀, ▶

ENTER

◀II, II▶

ENTER

SUB MENU

SUB MENU

RETURN

RETURN

PROG/CHECK   DISPLAY   STATUS   TIME SLIP

TIME SLIP

REC   REC MODE   EXT LINK   TIMER

ERASE※2

AUDIO
CREATE
CHAPTER※1

AUDIO   CREATE CHAPTER   ERASE   F Rec

ERASE※1

CREATE
CHAPTER※2

**Panasonic**

DVD / TV

※1 **For Continental Europe**
※2 **For Australia, N.Z., Asia and Middle East**

**Preparation**
● Turn on the television and select the appropriate video input to suit the connections to this unit.
● Turn on this unit.
● 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.
● When using 8 cm DVD-RAM or 8 cm DVD-R, remove the disc from the cartridge.
● For a DVD-RAM with a cartridge
  With the write-protect tab in the protect position, play automatically starts when inserted in the unit.
● Depending on the disc, it may take time for the menu screen, pictures, sound etc. to start.

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

● Press the button again to close the tray.

Insert label-up.

Insert with the arrow facing in.

↑ Insert fully so it clicks into place.
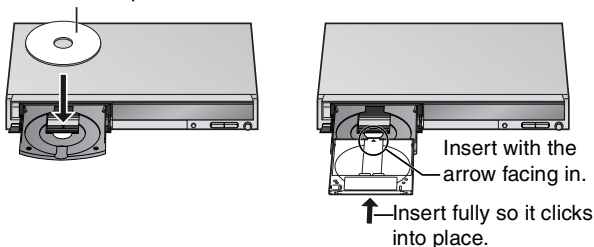
## 2   Press [▶] (PLAY).

RAM   -R   -RW(V)   +R   -RW(VR)
Play starts from the most recently recorded title.

PLAY

DVD-V   DVD-A   CD   VCD
Play starts from the beginning of the disc.

■ **Selecting recorded programmes (titles) to play**
RAM   -R   -RW(V)   +R   -RW(VR)
## 1   Press [DIRECT NAVIGATOR].

DIRECT NAVIGATOR   TITLE VIEW
⊘ DVD-RAM

07
8 28.10 MON

08
8 27.10 MON

- -

- -

- -

- -

Previous         Page 02/02         Next

⟳ ENTER
↻ RETURN   Ⓢ SUB MENU   II Select   Previous |◀◀ ▶▶| Next
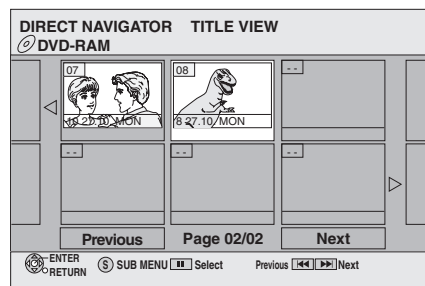
## 2   Press [▲, ▼, ◀, ▶] to select the title and press [ENTER].

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.

**To exit the screen**
Press [DIRECT NAVIGATOR].

Direct Navigator screen icons

| | |
|---|---|
| ● | Currently recording. |
| 🔒 | Title protected. |
| ▱ | Title that was not recorded due to recording protection (Digital broadcasts etc.) |
| ✕ | Title cannot be played because data is damaged. |
| ⊠ | Title with "One time only recording" restriction |
| Ⓝ (NTSC) Ⓟ (PAL) | Title recorded using a different encoding system from that of the TV system currently selected on the unit. |

■ **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 [TOP MENU] or [SUB MENU].

DVD-A   Press [TOP MENU].

VCD   Press [RETURN].

### Changing audio during play
## Press [AUDIO].

RAM   -RW(VR)   VCD

L R → L → R

DVD-RAM
PLAY

e.g., "L R" is selected ── L R
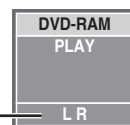
DVD-V   DVD-A
You can change the audio channel number each time you press the button. This allows you to change things like the soundtrack language.

Soundtrack   ⬍ 1 ENG   DD Digital 3/2.1ch

e.g., DVD-V English is the selected language (➜ page 26, Soundtrack).

## Operations during play

| | |
|---|---|
| Stop | **Press [■].**<br>The stopped position is memorized.<br>When stopped position is memorized (resume), the indicator appears in the unit's display. (Excluding when playing from the Direct Navigator and when playing a playlist.)<br>**Resume play function**<br>Press [▶] (PLAY) to restart from this position.<br><br>Stopped position<br>● If [■] is pressed several times, the indicator disappears and the position is cleared.<br>● The position is cleared if the unit is turned off or the tray is opened. |
| Pause | **Press [❙❙].**<br>Press again or press [▶] (PLAY) to restart play. |
| Search | **Press [◀◀] or [▶▶].**<br>● The speed increases up to 5 steps.<br>● Press [▶] (PLAY) to restart play.<br>● Audio is heard during first level search forward.<br>  Audio is heard during all levels of search. `DVD-A` (excluding moving picture parts) `CD`<br>● Depending on the disc, searching may not be possible. |
| Skip | **While playing or paused, press [❙◀◀] or [▶▶❙].**<br>● Each press increases the number of skips. |
| Starting from a selected title | **Press the numbered buttons.**<br>● This works only when stopped (screen saver is displayed on the television ➜ right) with some discs.<br>e.g.,  5: [0] ➜ [5]    `CD` (MP3, JPEG and TIFF discs only)    5: [0] ➜ [0] ➜ [5]<br>     15: [1] ➜ [5]                               15: [0] ➜ [1] ➜ [5]<br>`DVD-A` Selecting groups<br>While stopped (screen saver is displayed on the television ➜ right)<br>  5: [5] |
| Quick View `RAM`<br>The play speed can be increased without distorting the audio. | **Press and hold [▶] (PLAY/x1.3).**<br>Press again to return to normal speed. |
| Slow-motion<br>`RAM` `-R` `-RW(V)` `+R` `DVD-V`<br>`DVD-A` (Motion picture parts only)<br>`-RW(VR)` `VCD` | **While paused, press [◀◀] or [▶▶].**<br>● The speed increases up to 5 steps.<br>● Press [▶] (PLAY) to restart play.<br>● Forward direction only. `VCD`<br>● The unit will pause if slow-motion play is continued for approximately 5 minutes. |
| Frame-by-frame<br>`RAM` `-R` `-RW(V)` `+R` `DVD-V`<br>`DVD-A` (Motion picture parts only)<br>`-RW(VR)` `VCD` | **While paused, press [◀] (◀❙❙) or [▶] (❙❙▶).**<br>● Each press shows the next frame.<br>● Press and hold to change in succession forward or backward.<br>● Press [▶] (PLAY) to restart play.<br>● Forward direction only. `VCD` |
| Displaying the television image as a picture-in-picture | **Press [TIME SLIP].**<br>The unit displays the television image as a picture-in-picture.<br>● You will hear the playback audio.<br>● Press [TIME SLIP] again to cancel.<br>● Time Slip does not work when the unit's "TV System" settings are different from the title recorded on the disc.<br><br>Play images<br>Current receiving images<br>● You can change the channel being received by pressing [∧ ∨ CH].<br>● You cannot change the channel being received while recording. |
| Skipping the specified time (Time Slip)<br>`RAM` `-R` `-RW(V)` `+R` `-RW(VR)` | **1 Press [TIME SLIP].**<br>**2 Press [▲, ▼] to select the time and press [ENTER].**<br>Play skips the specified time.<br>● Press [TIME SLIP] to show the play images in full. |
| Manual Skip<br>`RAM` `-R` `-RW(V)` `+R` `-RW(VR)`<br>Play restarts from approximately 30 seconds later. | **Press [MANUAL SKIP].** |

## Editing operations during play

| | |
|---|---|
| Erase<br>`RAM` `-R` `-RW(V)` `+R`<br>Erase titles during play. | **1 Press [ERASE].**<br>**2 Press [◀, ▶] to select "Erase" and press [ENTER].**<br>● A title cannot be restored once it is erased. Make certain before proceeding.<br>● You cannot erase when recording at the same time.<br>● The available recording space on DVD-R or +R does not increase when you erase titles.<br>● Available recording space on a DVD-RW (DVD-Video format) increases only when the last recorded title is erased. It does not increase if other titles are erased. |
| Create chapter<br>`RAM`<br>(➜ page 28, Title/Chapter) | **Press [CREATE CHAPTER].**<br>Chapters are divided at the point pressed.<br>● You cannot create chapters when the unit is in timer recording standby.<br>● **For Continental Europe** You cannot create chapters when the unit is in EXT LINK standby. |

RQT8020

ENGLISH

*Playing back*

e.g., **Continental Europe**

**Numbered buttons**

|◄◄, ►►|

**TOP MENU**

**SUB MENU**

**STATUS**

**FUNCTIONS**

**▲, ▼, ◄, ►**
**ENTER**

**RETURN**
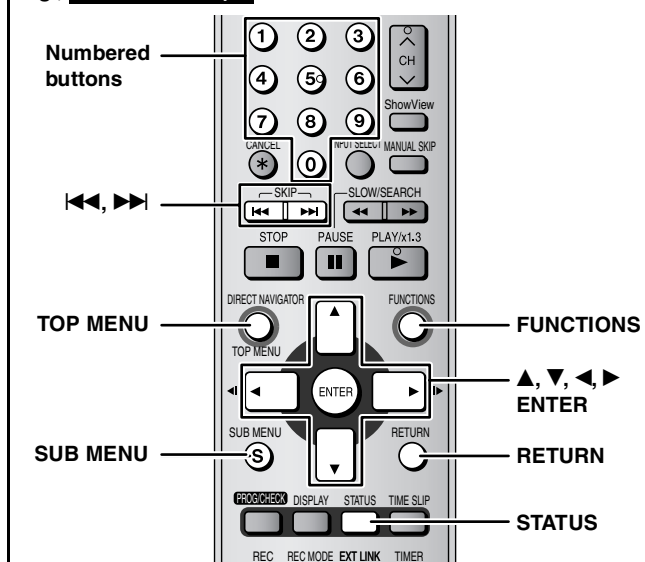
### Regarding MP3 and still pictures (JPEG/TIFF)
- Compatible formats: ISO9660 level 1 or 2 (except for extended formats) and Joliet
- Maximum number of files (tracks) and folders (groups) recognizable: 999 files (tracks) and 99 folders (groups)
- This unit is compatible with multi-session but reading or play of the disc may take time if there are a lot of sessions.
- Operation may take time to complete when there are many files (tracks) and/or folders (groups) and some may not display nor be playable.
- The display order on this unit may differ from how the order is displayed on a computer.
- Depending on how you create the disc (writing software), files (tracks) and folders (groups) may not play in the order you numbered them.
- This unit is not compatible with packet-write format.
- Depending on the recording, some items may not be playable.

### Regarding MP3
- File format: MP3
- Files must have the extension ".mp3" or ".MP3".
  Bit rates: 32 kbps to 320 kbps
- Sampling frequency: 16 kHz/22.05 kHz/24 kHz/32 kHz/ 44.1 kHz/48 kHz
- This unit is not compatible with ID3 tags.

### Regarding still pictures (JPEG/TIFF)
- File format: JPEG, TIFF (non-compressed RGB chunky format) Files must have the extension ".jpg", ".JPG", ".tif" and ".TIF".
- Number of pixels: 34 x 34 to 6144 x 4096 (Sub sampling is 4:2:2 or 4:2:0)
- Operation may take time to complete when playing TIFF format still pictures.
- MOTION JPEG is not supported.

- - - - - - - - - - - - - - - - - - - - - - - - - - - -

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

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

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

Order of play

Order of play
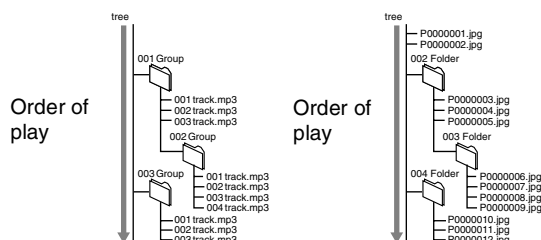
## Playing MP3

`CD`

This unit plays MP3 files recorded on CD-R/RW designed for audio recording that are finalized (→ page 41) on a computer.
The screen shown 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.
> Select "JPEG" from MENU in FUNCTIONS if you play pictures ( JPEG ).
> ENTER / RETURN

### 1 Press [TOP MENU].

Selected group

**G:** Group no.
**T:** Track no. in the group
**TOTAL:** Track no./Total track no. in all groups

| No. | Group |
|---|---|
| 1 | : My favorite |

| Total | Track | Tree |
|---|---|---|
| 1 | 001 Both Ends Freezing | ▷ |
| 2 | 002 Lady Starfish | ▷ |
| 3 | 003 Life on Jupiter | ▷ |
| 4 | 004 Metal Glue | ▷ |
| 5 | 005 Paint It Yellow | ▷ |
| 6 | 006 Pyjamamama | ▷ |
| 7 | 007 Shrimps from Mars | ▷ |
| 8 | 008 Starperson | ▷ |
| 9 | 009 Velvet Cuppermine | ▷ |
| 10 | 010 Ziggy Starfish | ▷ |

Page 001/002
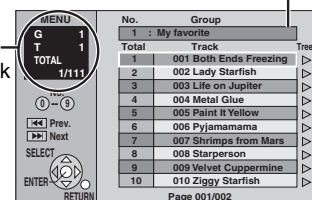
- Files are treated as tracks and folders are treated as groups.

### 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]

#### ■ Using the tree screen to find a group
**While the file list is displayed**
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.

MENU
G 8
T 14
TOTAL 40/111

Tree
MP3 music
001 My favorite
001 Brazilian pops
002 Chinese pops
003 Czech pops
004 Hungarian pops
005 Liner notes
006 Japanese pops
007 Mexican pops
008 Philippine pops
009 Swedish pops
001 Momoko
002 Standard number
001 Piano solo
002 Vocal

G 7/25
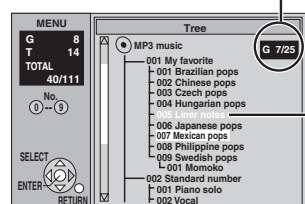
You cannot select groups that contain no compatible files.

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

**To show other pages**
Press [|◄◄, ►►|].

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

**To exit the screen**
Press [TOP MENU].

## Playing still pictures (JPEG/TIFF)

`CD`

You can play CD-R/CD-RW discs which contain still pictures (JPEG/ TIFF) that have been recorded and finalized (→ page 41) on a computer.
The screen shown right is displayed when you insert a disc containing MP3 files and still pictures (JPEG/TIFF).
Select JPEG menu before perform following the steps below.
(→ page 25, To select JPEG Menu)

> Playback mode is set to MP3.
> Select "JPEG" from MENU in FUNCTIONS if you play pictures ( JPEG ).
> ENTER / RETURN

### 1 Press [TOP MENU].

JPEG Menu PICTURE (JPEG) VIEW
CD(JPEG)
Folder image001

Previous | Page 01/01 | Next
ENTER
RETURN
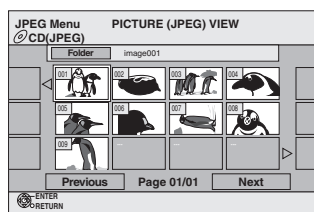
## 2 Press [▲, ▼, ◄, ►] to select the still picture and press [ENTER].

● The selected still picture is displayed on the screen.
You can also select still pictures with the number buttons.
e.g., 5: [0] → [0] → [5]
 15: [0] → [1] → [5]

### ■ To select another folder
**While the JPEG Menu is displayed**
**1 Press [▲, ▼, ◄, ►] to select "Folder" and press [ENTER].**

**F:** Selected folder no./Total folder no.

```
JPEG Menu      Folder
 CD(JPEG)
                          F 1/21
          12.02.2004
          image001
          image002
          image003
          image004
          image005
          image006
          image007
          image008
          image009
          image010
          DATA1
          DATA2
       ENTER
       RETURN
```
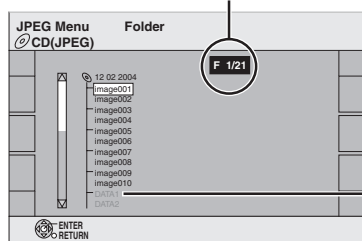
You cannot select folders that contain no compatible files.

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

---

**To display the previous or next still picture during play**
Press [◄, ►].

**To show other pages**
Press [|◄◄, ►►|].

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

**To exit the screen**
Press [TOP MENU].

### To select JPEG Menu

## 1 Press [ENTER].

## 2 Press [FUNCTIONS].

```
FUNCTIONS   DVD          VOL_200411291118
          CD(MP3/JPEG)    MP3 Playback mode

Playback    MENU

Recording   TIMER RECORDIN
```
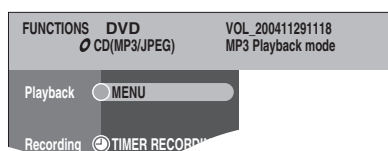
## 3 Press [▲, ▼] to select "MENU" and press [ENTER].

```
         MENU
    Select file type.

      MP3

      JPEG

    ENTER       RETURN
```
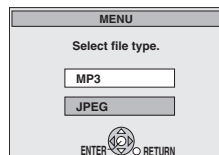
## 4 Press [▲, ▼] to select "JPEG" and press [ENTER].

---

### To display still pictures one by one

**After Step 1 (→ page 24, Playing still pictures (JPEG/TIFF))**

## 2 Press [▲, ▼, ◄, ►] to select "Folder" and press [SUB MENU].

```
Start Slide Show
Slide Interval
```
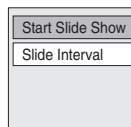
## 3 Press [▲, ▼] to select "Start Slide Show" and press [ENTER].

---

**To change the slide interval**
① In step 2 above, press [▲, ▼] to select "Slide Interval" and press [ENTER].

```
        Slide Interval
  Set display interval for Slide Show.
  Display interval   ◄  5sec.  ►
       Press ENTER to set.
       SELECT
       ENTER      RETURN
```
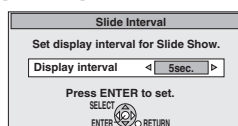
② Press [◄, ►] to select the slide interval and press [ENTER].
● You can select a slide interval between 0-30 seconds.

### To rotate and zoom in / zoom out

## 1 While playing
### Press [SUB MENU].

```
Rotate RIGHT
Rotate LEFT
Zoom in
    ENTER
    RETURN
```
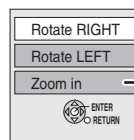
The "Zoom in / Zoom out" function is only available for still pictures smaller than 640 x 480 pixels.

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

---

**To return the picture to its original size**
① Press [SUB MENU].
② Press [▲, ▼] to select "Zoom out" and press [ENTER].

**To return the rotated picture to its original position**
① Press [SUB MENU].
② Press [▲, ▼] to select the opposite rotation button and press [ENTER].

**Note**

● The rotation and enlargement information will not be stored.
● When zooming in, the picture may be cut off.

### To view the picture properties

### Press [STATUS] twice.

```
12:03:00  30.11.

 Date  26.11.2004   No.      2/ 30
```

**Shooting date**

---

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

# Using on-screen menus

**e.g.,** **Continental Europe**



**DISPLAY**

**FUNCTIONS**

**▲, ▼, ◄, ►**
**ENTER**

**STATUS**
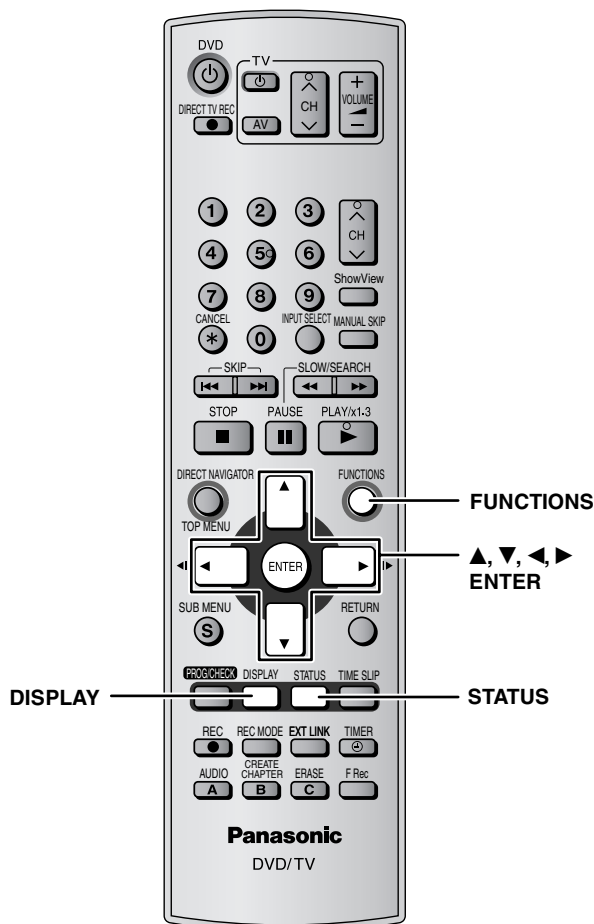
## Common procedures

### 1 Press [DISPLAY].

| Disc | | |
|---|---|---|
| **Play** | **Soundtrack** | **1** | **□□ Digital 2/0 ch** |
| **Picture** | **Subtitle** | **Off** |
| **Sound** | **Audio channel** | **L R** |
| **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 the disc content

**Soundtrack**※

[RAM] [-R] [-RW(V)] [+R] [-RW(VR)]
The disc's audio attributes appear.
[DVD-V] [DVD-A]
Select the audio and language (➔ below, Audio attribute, Language).

**Subtitle**※

[DVD-V] [DVD-A]
Turn the subtitle on/off and select the language
(➔ below, Language).
[RAM] [-R] [-RW(V)] [+R] [-RW(VR)] (Only discs that contain subtitle on/off information)
≥Subtitle on/off information cannot be recorded using this unit.

**Audio channel** [RAM] [-RW(VR)] [VCD]

➔ page 22, Changing audio during play

**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 42)** [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 22) on the disc.
≥The display changes according to the disc content. You cannot change when there is no recording.

**Audio attribute**

| LPCM/PPCM/□□Digital/DTS/MPEG: | Signal type |
|---|---|
| k (kHz): | Sampling frequency |
| b (bit): | Number of bits |
| ch (channel): | Number of channels |

**Language**

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

≥Enter a code (➔ page 37) when you select "✳: Others".

## Play menu–Change the 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] (excluding MP3 discs) [VCD]
≥Chapter      [RAM] [-R] [-RW(V)] [+R] [DVD-V] [-RW(VR)]
≥Group        [DVD-A] [CD] (MP3 discs only)
≥PL (Playlist) [RAM]
≥Title          [RAM] [-R] [-RW(V)] [+R] [DVD-V] [-RW(VR)]
≥Track        [DVD-A] [CD] [VCD]
Select "Off" to cancel.

## Picture menu–Change the picture quality

**Playback NR**

Reduces noise and picture degradation.

**Progressive**※ (➔ page 42)

Select "On" to enable progressive output.
Select "Off" if the picture is stretched horizontally.

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

Select the method of conversion for progressive output to suit the type of title being played (➔ page 41, Film and video).

When the output signal is PAL

- ≥**Auto:** Detects 25 frame-per-second film content and appropriately converts it.
- ≥**Video:** Select when using "Auto", and the video content is distorted.

When the output signal is NTSC

- ≥**Auto 1 (normal):**
  Detects 24 frame-per-second film content and appropriately converts it.
- ≥**Auto 2:** Compatible with 30 frame-per-second film content in addition to 24 frame-per-second film content.
- ≥**Video:** Select when using "Auto 1" and "Auto 2", and the video content is distorted.

**AV-in NR** (Only when AV1, AV2, AV3 or AV4 is selected)

Reduces video tape noise while dubbing.
- ≥**Automatic:**
  Noise reduction only works on picture input from a video tape.
- ≥**On:** Noise reduction works for any input video.
- ≥**Off:** Noise reduction is off. You can record the input signal as it is.

※ Only when you have set "Progressive" to "On" in the SETUP menu (➔ page 36).

## Sound menu–Change the sound effect

**V.S.S.** `RAM` `-R` `-RW(V)` `+R` `DVD-V` `DVD-A` `-RW(VR)`
(Dolby Digital, 2-channel or over only)

Enjoy a surround-like effect if you are using two front speakers only.
- ≥Turn V.S.S. off if it causes distortion.
- ≥V.S.S. does not work for bilingual recordings.

**Dialog Enhancer** `RAM` `-RW(V)` `+R` `DVD-V` `DVD-A` `-RW(VR)`
(Dolby Digital, 3-channel or over only, including a center channel)

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

## Other menu–Change the display position

**Position**
1 - 5: The higher the setting the lower the on-screen menu moves.

---

# FUNCTIONS window and Status messages

## FUNCTIONS window

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

### 1 While stopped
### Press [FUNCTIONS].
Functions displayed depend on the type of disc.

**e.g.,** Continental Europe

| FUNCTIONS | DVD | DOCUMENTARY |
| | ⊘DVD-RAM | Cartridge Protection  Off |
| | | Disc Protection  Off |
| Playback | ■ DIRECT NAVIGATOR | |
| Recording | ⏲ TIMER RECORDING | |
| | ⠿ ShowView | |
| ENTER | | To Others |
| RETURN | | |

"To Others" ⬇   ⬆ "Return"

| FUNCTIONS | DVD | DOCUMENTARY |
| | ⊘DVD-RAM | Cartridge Protection  Off |
| | | Disc Protection  Off |
| Playback | ■ DIRECT NAVIGATOR | ⊠ PLAYLISTS |
| | | ⊖ FLEXIBLE REC |
| Recording | ⏲ TIMER RECORDING | ⊚ SETUP |
| | ⠿ ShowView | ⊘ DISC MANAGEMENT |
| ENTER | To Others | Return |
| RETURN | | |

### 2 Press [▲, ▼] to select an item and press [ENTER].
- ≥If you select "To Others", press [▲, ▼] to select an item (e.g., "SETUP" or "DISC MANAGEMENT") and press [ENTER].
- ≥If you select "Return", press [▲, ▼] to select an item (e.g., "DIRECT NAVIGATOR" or "TIMER RECORDING") and press [ENTER].

**To exit the FUNCTIONS window**
Press [FUNCTIONS].

## 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    ─── TV audio type being received (➔ below)
L R       ─── Selected audio type
```

Date and time

Available recording time and recording mode

```
12:34:50  24.12.   ■ 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

No display
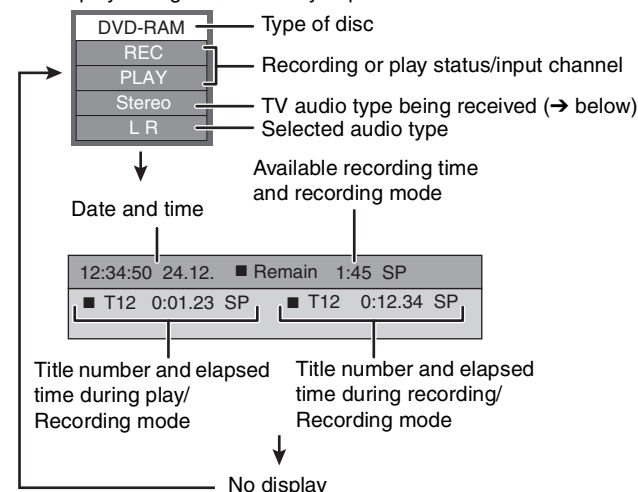
- ≥**TV audio type**

**Stereo:** STEREO/NICAM※ stereo broadcast
**M 1/M 2:** Bilingual/NICAM※ dual-sound broadcast
**M 1:** NICAM※ monaural broadcast

※ Not provided for Germany, Austria, Italy, Netherlands, Greece

ENGLISH

*Playing back*

**e.g.,** Continental Europe
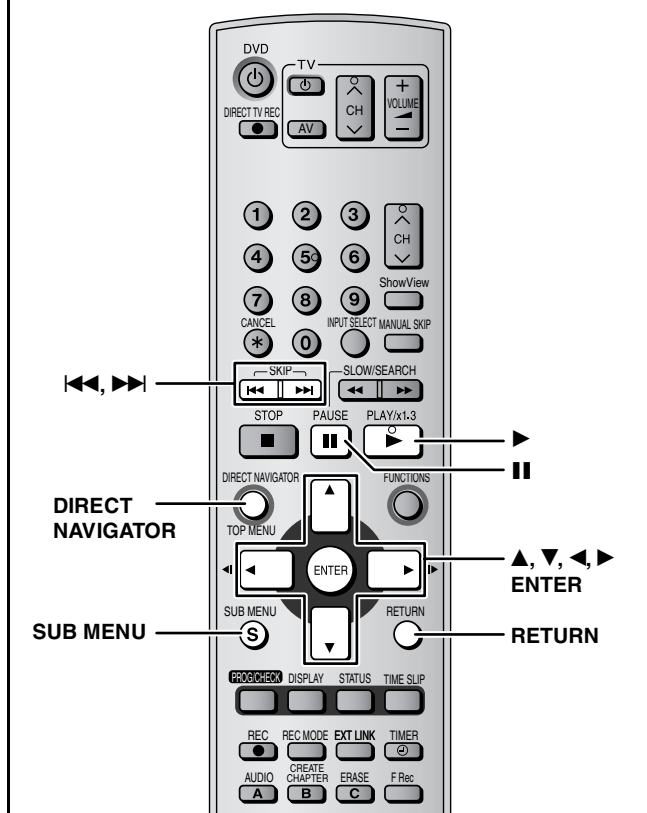


`RAM` `-R` `-RW(V)` `+R`

---

**Title/Chapter**
Programmes are recorded as a single title consisting of one chapter.

Title

Chapter

Start                                             End
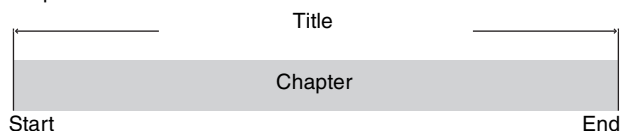
You can divide a title into multiple chapters. `RAM`
(➔ page 23, 29, "Create Chapter")

Title

| Chapter | Chapter | Chapter | Chapter |

You can change the order of chapters and create a playlist
(➔ page 30). `RAM`

≥Titles are divided into about 5-minute chapters after finalizing
(➔ page 33). `-R` `-RW(V)` `+R`

---

≥The maximum number of items on a disc:
- –Titles:      99 (`+R` 49 titles)
- –Chapters:  Approximately 1000 (`+R` Approximately 254)
  (Depends on the state of recording.)

Note
≥Once erased or partially erased, title/chapters cannot be restored to their original state. Make certain before proceeding.
≥You cannot edit during recording or chasing play.

**Preparation**
≥Turn on the television and select the appropriate video input to suit the connections to this unit.
≥Turn the unit on.
≥Insert the disc with the title to edit.

---

## Editing titles/chapters and playing chapters

**Preparation**
Release protection (➔ page 32). `RAM`

**1** During play or while stopped
**Press [DIRECT NAVIGATOR].**

**2** **Press [▲, ▼, ◄, ►] to select the title.**
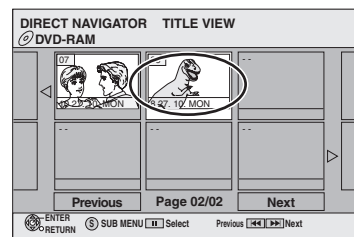


**To show other pages**
Press [▲, ▼, ◄, ►] to select "Previous" or "Next" and press [ENTER].
≥You can also press [|◄◄, ►►|] to show other pages.
**Multiple editing**
Select with [▲, ▼, ◄, ►] and press [❚❚]. (Repeat.)
A check mark appears. Press [❚❚] again to cancel.

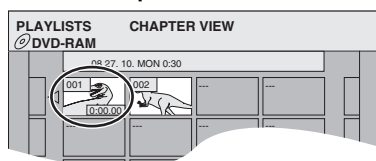**3** **Press [SUB MENU], then [▲, ▼] to select the operation and press [ENTER].**
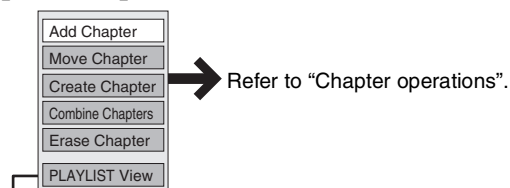≥If you select "Edit", press [▲, ▼] to select the operation and press [ENTER] (➔ page 29).
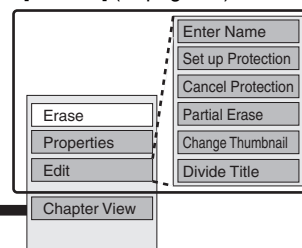


If you select "Chapter View"

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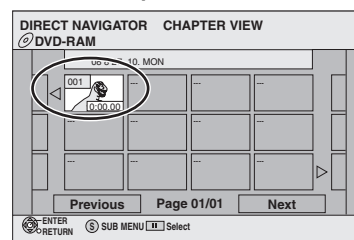


≥To show other pages/Multiple editing (➔ above)

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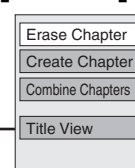


≥You can go back to the Title View.
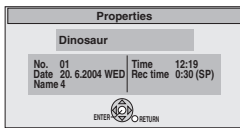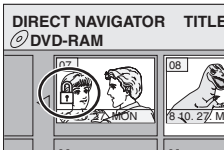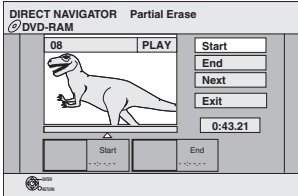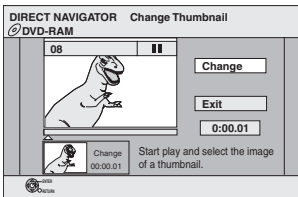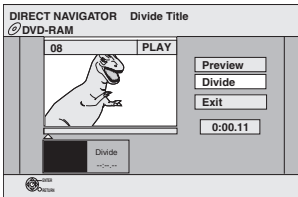
**To exit the screen**
Press [DIRECT NAVIGATOR].
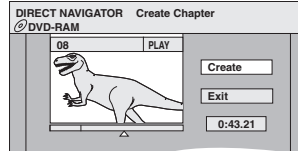
**To return to the previous screen**
Press [RETURN].

## Title operations

| | |
|---|---|
| Erase ※ <br> `RAM` `-R` `-RW(V)` `+R` | **Press [◄, ►] to select "Erase" and press [ENTER].** <br> ● **Once erased, the recorded contents are lost and cannot be restored.** <br>  Make certain before proceeding. <br> ● The available recording time on DVD-R or +R does not increase when you erase titles. <br> ● Available recording space on a DVD-RW (DVD-Video format) increases only when the last recorded title is erased. It does not increase if other titles are erased. |
| Properties <br> `RAM` `-R` `-RW(V)` `+R` <br> `-RW(VR)` | Information (e.g., time and date) is shown. <br> ● Press [ENTER] to exit the screen. <br><br> **Properties** <br> **Dinosaur** <br> No. 01   Time 12:19 <br> Date 20. 6.2004 WED   Rec time 0:30 (SP) <br> Name 4 <br> ENTER ◯ RETURN |
| Enter Name <br> `RAM` `-R` `-RW(V)` `+R` | You can give names to recorded titles. <br> ➔ page 34, Entering text |
| Set up Protection ※ <br> Cancel Protection ※ <br> `RAM` | If set, this will protect the title from accidental erasure. <br><br> **Press [◄, ►] to select "Yes" and press [ENTER].** <br> The lock symbol appears when the title is protected. <br><br> DIRECT NAVIGATOR   TITLE <br> ⟲ DVD-RAM <br> 07   08 |
| Partial Erase <br> `RAM` <br> (➔ below, "For your reference") | You can remove unnecessary part of the recording. <br> ① **Press [ENTER] at the start point and end point of the section you want to erase.** <br> ② **Press [▲, ▼] to select "Exit" and press [ENTER].** <br> ● Select "Next" and press [ENTER] to erase other sections. <br> ③ **Press [◄, ►] to select "Erase" and press [ENTER].** <br><br> DIRECT NAVIGATOR   Partial Erase <br> ⟲ DVD-RAM <br> 08   PLAY   Start / End / Next / Exit   0:43.21 <br> Start   End |
| Change Thumbnail <br> `RAM` `-R` `-RW(V)` `+R` <br> (➔ below, "For your reference") | You can change the image to be shown as a thumbnail picture in the Title View. <br> ① **Press [►] (PLAY) to start play.** <br> ② **Press [ENTER] when the image you want to use as a thumbnail is shown.** <br> **To change the thumbnail** <br> Restart play and press [▲, ▼] to select "Change", then press [ENTER] at the point you want to use as the thumbnail. <br> ③ **Press [▲, ▼] to select "Exit" and press [ENTER].** <br><br> DIRECT NAVIGATOR   Change Thumbnail <br> ⟲ DVD-RAM <br> 08   ❚❚   Change / Exit   0:00.01 <br> Change 00:00.01   Start play and select the image of a thumbnail. |
| Divide Title <br> `RAM` <br> (➔ below, "For your reference") | You can divide a title into two. <br> ① **Press [ENTER] at the point you want to divide the title.** <br> ② **Press [▲, ▼] to select "Exit" and press [ENTER].** <br> ③ **Press [◄, ►] to select "Divide" and press [ENTER].** <br> **To confirm the division point** <br> Press [▲, ▼] to select "Preview" and press [ENTER]. (The unit plays 10 seconds before and after the division point.) <br> **To change the division point** <br> Restart play and press [▲, ▼] to select "Divide", then press [ENTER] at the point you want to change. <br> **Note** <br> ● The divided titles retain the name and CPRM property (➔ page 41) of the original title. <br> ● Video and audio just before and after the dividing point may momentarily cut out. <br><br> DIRECT NAVIGATOR   Divide Title <br> ⟲ DVD-RAM <br> 08   PLAY   Preview / Divide / Exit   0:00.11 <br> Divide |

※ Multiple editing is possible.

## Chapter operations

| | |
|---|---|
| Erase Chapter ※ <br> `RAM` | **Press [◄, ►] to select "Erase" and press [ENTER].** <br> ● **Once erased, the recorded contents are lost and cannot be restored.** <br>  Make certain before proceeding. |
| Create Chapter <br> `RAM` <br> (➔ below, "For your reference") | ① **Press [ENTER] at the point you want to divide.** <br> ● Repeat this step to divide at other points. <br> ② **Press [▲, ▼] to select "Exit" and press [ENTER].** <br><br> DIRECT NAVIGATOR   Create Chapter <br> ⟲ DVD-RAM <br> 08   PLAY   Create / Exit   0:43.21 |
| Combine Chapters <br> `RAM` | **Press [◄, ►] to select "Combine" and press [ENTER].** <br> ● The selected chapter and next chapter are combined. |

※ Multiple editing is possible.

**For your reference**
● Use search or Time Slip (➔ page 23) to find the desired point.
● To find the desired point correctly, use slow-motion or frame-by-frame (➔ page 23).
● Press [|◄◄, ►►|] to skip to the end of a title.

*Editing*

e.g., Continental Europe

**FUNCTIONS**

**▲, ▼, ◄, ►
ENTER**

**SUB MENU**

**RETURN**
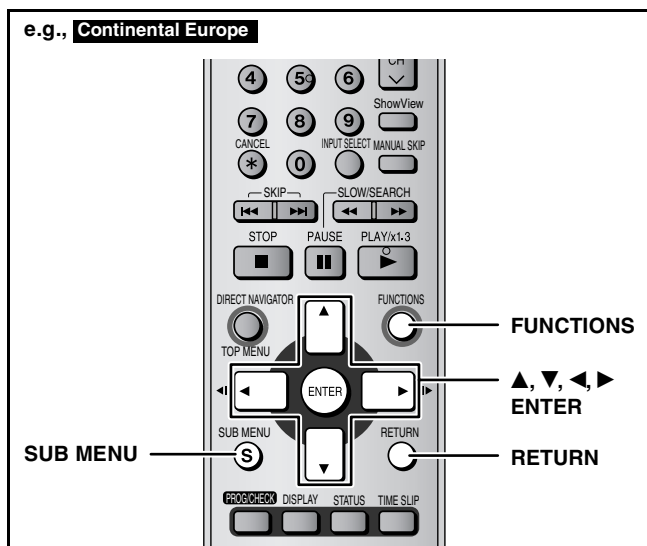
You can arrange the chapters (→ page 28) to create a playlist.

| Title | | | Title | |
|---|---|---|---|---|
| Chapter | Chapter | Chapter | Chapter | Chapter |

Playlist | Chapter | Chapter |
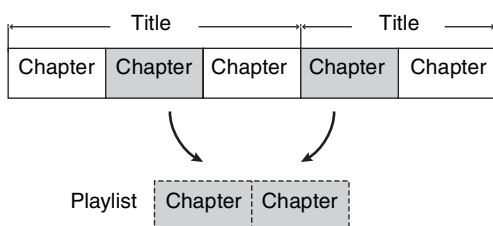
≥Editing playlists doesn't modify the recorded data.
≥Playlists are not recorded separately so this doesn't use much capacity.

[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.
≥You cannot create or edit a playlist while recording.

## Creating playlists

**Preparation**
≥Turn the unit on.
≥Turn on the television and select the appropriate video input to suit the connections to this unit.
≥Insert the disc with the title to edit.
≥Release protection (→ page 32).

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

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

e.g., Continental Europe

FUNCTIONS    DVD              DOCUMENTARY
             ⊘DVD-RAM         Cartridge Protection  Off
                              Disc Protection  Off

Playback    DIRECT NAVIGATOR  PLAYLISTS
                              FLEXIBLE REC

Recording   TIMER RECORDING   SETUP
            ShowView          DISC MANAGEMENT

     ENTER
     RETURN        To Others         Return

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

PLAYLISTS       PLAYLIST VIEW
⊘DVD-RAM

   Create

       Previous      Page 01/01      Next
          ENTER
          RETURN
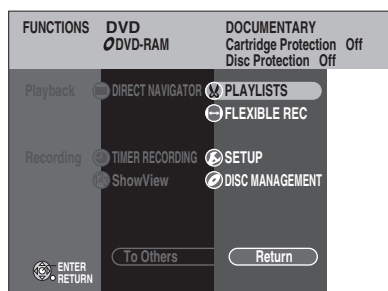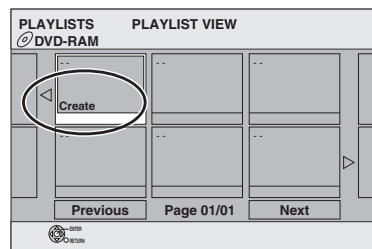
**4** **Press [▲, ▼, ◄, ►] to select "Create" and press [ENTER].**

**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
                    MON
   Source Title                    Page 01/01
   01     02

   Source Chapter                  Page 001/001
   001    002    003

Chapters in PLAYLIST
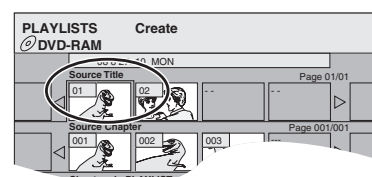
**6** **Press [◄, ►] to select the chapter you want to add to a playlist and press [ENTER].**
Press [▲] to cancel.

PLAYLISTS       Create
⊘DVD-RAM
       08 8 27. 10. MON
   Source Title                    Page 01/01
   01     02      --

   Source Chap.                    Page 001/001
   001    002    003

   Chapters in PLAYLIST            Page 001/001
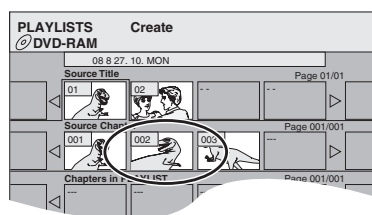
≥You can also create a new chapter from the source title. Press [SUB MENU] to select "Create Chapter" and press [ENTER] (→ page 29, Create Chapter).

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

PLAYLISTS       Create
⊘DVD-RAM
       08 8 27. 10. MON
   Source Title                    Page 01/01
   01     02      --

   Source Chapter                  Page 001/001
   001    002    003    ---

   Chapters in PLAYLIST            Page 001/001
   ---    ---    ---

          RETURN             Press RETURN to exit.
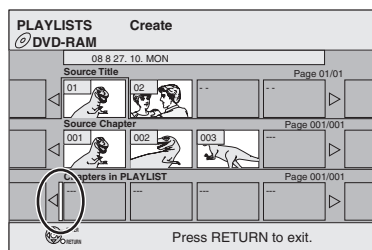
≥Press [▲] to select other source titles.
≥Repeat steps 6–7 to add other chapters.

**8** **Press [RETURN].**

**To exit the screen**
Press [RETURN] several times.

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

## Editing and playing playlists/chapters

RAM -RW(VR) (play only)

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

**2** **Press [▲, ▼] to select "To Others" 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
                      Create
```
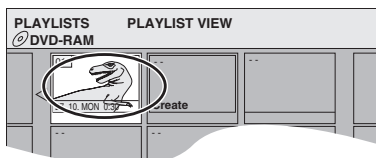
● **To show other pages/Multiple editing (→ page 28)**

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



```
                    Create
                    Copy
                    Enter Name        Refer to "Playlist
                    Change Thumbnail   operations".
Erase
Properties
Edit
Chapter View
```
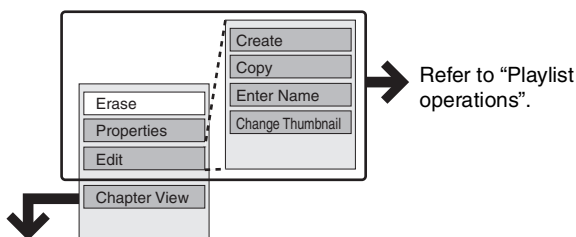
**If you select "Chapter View"**

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


```
PLAYLISTS      CHAPTER VIEW
 DVD-RAM
08 27. 10. MON 0:30
   001      002
   0:00.00
```

● **To show other pages/Multiple editing (→ page 28)**

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

```
Add Chapter
Move Chapter
Create Chapter     Refer to "Chapter operations".
Combine Chapters
Erase Chapter
PLAYLIST View
```

● You can go back to the PLAYLIST View.

**To exit the screen**
Press [RETURN] several times.

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

## Playlist operations

| Erase ※ RAM | Press [◄, ►] to select "Erase" and press [ENTER]. |
|---|---|
| Properties RAM -RW(VR) | Playlist information (e.g., time and date) is shown. ● Press [ENTER] to exit the screen.  |
| Create RAM | → page 30, Creating playlists, Step 5-8 |
| Copy ※ RAM | Press [◄, ►] to select "Copy" and press [ENTER]. |
| Enter Name RAM | → page 34, Entering text |
| Change Thumbnail RAM | → page 29, Change Thumbnail |

※ Multiple editing is possible.

## Chapter operations

RAM

● Editing chapters in a playlist does not modify the source titles and source chapters.

| Add Chapter | → page 30, Creating playlists, Step 5–7 |
|---|---|
| Move Chapter | Press [▲, ▼, ◄, ►] to select the position to insert the chapter and press [ENTER].  |
| Create Chapter | → page 29, Create Chapter |
| Combine Chapters | → page 29, Combine Chapters |
| Erase Chapter ※ | → page 29, Erase Chapter |

※ Multiple editing is possible.

## DISC MANAGEMENT

e.g., **Continental Europe**
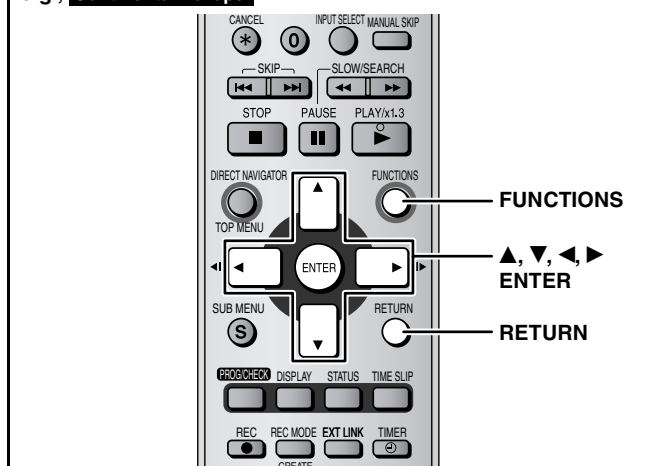


**Preparation**
- Turn on the television and select the appropriate video input to suit the connections to this unit.
- Turn the unit on.
- Insert the disc to be managed.

### Setting the protection

RAM

**1** While stopped

**Press [FUNCTIONS].**

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

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

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

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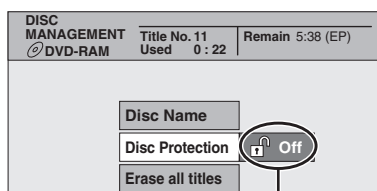


The lock symbol appears closed when the disc is write-protected.

#### Setting the protection for the whole disc

- For a DVD-RAM with a cartridge

With the write-protect tab in the protect position, play automatically starts when inserted in the unit.
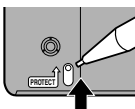
**To exit the screen**
Press [RETURN] several times.

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

### Providing a disc with a name

RAM  -R  -RW(V)  +R

**Preparation**
- Release protection (→ left).

**1** While stopped

**Press [FUNCTIONS].**

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

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

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

→ page 34, Entering text

- The disc name is displayed in the FUNCTIONS window.
- With a finalized DVD-R, DVD-RW (DVD-Video format) and +R, the name is displayed on the Top Menu.



**To exit the screen**
Press [RETURN] several times.

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

### Erasing all titles–Erase all titles

RAM
**Preparation**
- Release protection (→ left).

**1** While stopped

**Press [FUNCTIONS].**

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

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

**4** **Press [▲, ▼] to select "Erase 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 erased, the recorded contents are lost and cannot be restored.** Make certain before proceeding.
- Erasing all video titles will result in all playlists also being erased.
- Erase does not work if one or more titles are protected.

**To exit the screen**
Press [RETURN] several times.

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

## Erasing all the contents of a disc –Format Disc

RAM -RW(V) -RW(VR)

Note

- **Formatting erases all contents, and it cannot be restored. Check carefully before proceeding.** The contents are erased when you format it even if you have set protection.

**Preparation**
- RAM Release protection (→ page 32).

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

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

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

**4** **Press [▲, ▼] to select "Format Disc" 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.

**7** **Press [ENTER].**

Note

- **Do not disconnect the AC mains lead while formatting.** This can render the disc unusable.
  Formatting normally takes a few minutes, however it may take up to a maximum of 70 minutes.

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

**To exit the screen**
Press [RETURN] several times.

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

## Enabling DVD-R, DVD-RW (DVD-Video format) or +R to be played on other equipment–Finalize

-R -RW(V) +R

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

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

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

**4** **Press [▲, ▼] to select "Auto-Play Select" and press [ENTER].**
**Press [▲, ▼] to select "Top Menu" or "Title 1" and press [ENTER].**
You can select whether to show the top menu after finalizing.
Top Menu: The top menu appears first.
Title 1: The disc content is played without displaying the top menu.

**5** **Press [▲, ▼] to select "Finalize" and press [ENTER].**
① **Press [◀, ▶] to select "Yes" and press [ENTER].**
② **Press [◀, ▶] to select "Start" and press [ENTER].**
Finalizing starts.
You cannot cancel finalizing.
A message appears when finalizing is finished.
③ **Press [ENTER].**

Note
When finalizing a high-speed recording compatible disc, it may take longer than displayed on the confirmation screen (approximately four times).

**After finalizing**
- -R +R **The disc becomes play-only and you can no longer record or edit.**
- -RW(V) **You can record and edit the disc after formatting (→ left) although it becomes play-only after finalizing.**
- Titles are divided into about 5-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.

**Do not disconnect the AC mains lead while finalizing.** This will render the disc unusable.
- Finalizing takes up to 15 minutes.

- You cannot finalize DVD-R, DVD-RW (DVD-Video format) or +R recorded on other manufacturer's equipment.
- DVD-R, DVD-RW (DVD-Video format) or +R finalized on this unit may not be playable on other players due to the condition of the recording.

**For Continental Europe**
- Visit Panasonic's homepage for more information about DVDs.
  **http://www.panasonic-europe.com**

**To exit the screen**
Press [RETURN] several times.

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

*Convenient fuctions*

# Entering text

**e.g.,** `Continental Europe`

**Numbered buttons**

✳ **CANCEL**

◄◄, ►►|

■

❚❚

**SUB MENU**

**FUNCTIONS**

▲, ▼, ◄, ►
**ENTER**

**RETURN**

**A**

**B**

**C**

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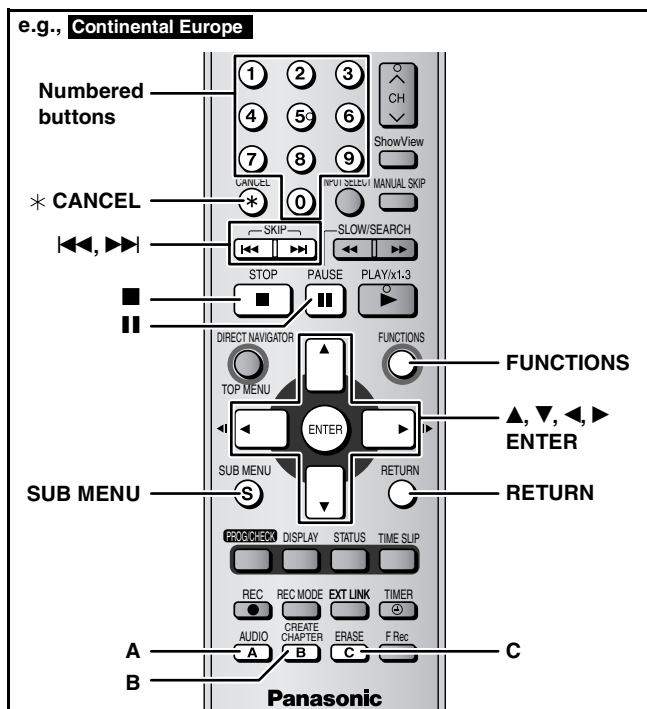
`RAM` `-R` `-RW(V)` `+R`

You can give names to recorded titles, etc.
The maximum number of characters:

| `RAM` | Characters |
|---|---|
| Title | 64 (44※) |
| Playlist | 64 |
| Disc | 64 |

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

※ timer recording

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

## 1 Show Enter Name screen.

| Title (timer recording) | (➔ page 18, 19, 20, Step 3) |
|---|---|
| Title | (➔ page 28, Step 3) |
| Playlist | (➔ page 31, Step 5) |
| Disc | (➔ page 32, "Providing a disc with a name") |

**Name field:** shows the text you have entered

**For Continental Europe**
Press [A] or [B] to select character type and press [ENTER].
[A] Standard Characters (➔ left, Alphabet characters etc.)
[B] Other Characters (➔ below, Umlaut characters, accented characters etc.)
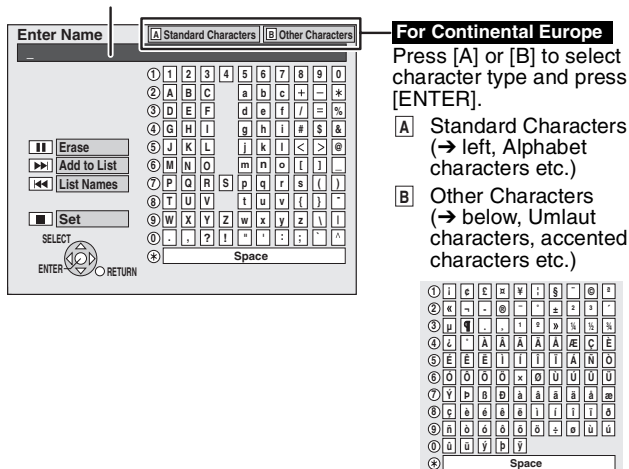
## 2 Press [▲, ▼, ◄, ►] to select a character and press [ENTER].

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].
- **To add frequently used names**
  Maximum number of registered names: 20
  Maximum number of characters per name: 20
  ① **Press [►►|] while the name to be added is shown in the name field.**
  ② **Press [◄] to select "Add" and press [ENTER].**
     - **To cancel adding word**
       Press [RETURN].
- **To recall an added name**
  ① **Press [|◄◄].**
  ② **Press [▲, ▼, ◄, ►] to select the name to be recalled and press [ENTER].**
- **To erase an added name**
  ① **Press [|◄◄].**
  ② **Press [▲, ▼, ◄, ►] to select the name to be erased and press [SUB MENU].**
  ③ **Press [ENTER].**
  ④ **Press [◄] to select "Erase" and press [ENTER].**
  ⑤ **Press [RETURN].**

## 3 Press [■] (Set).

Returns to the previously displayed screen.

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

# Changing the unit's settings

## Common procedures

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

## 2 Press [▲, ▼] to select "To Others" and press [ENTER].

## 3 Press [▲, ▼] to select "SETUP" and press [ENTER].

Tabs   Menus   Options

SETUP    Remote Cotrol    DVD 2
         Clock
Tuning   Power Sa...
         Qui...

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

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

## 6 Press [▲, ▼] to select the option and press [ENTER].
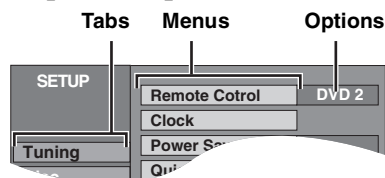
**To exit the screen**
Press [RETURN] several times.

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

*Convenient fuctions*

## Summary of settings

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

| Tabs | Menus | Options (Underlined items are the factory presets.) |
|---|---|---|
| **Tuning** | **Manual** (→ page 38) | |
| | **Auto-Setup Restart** (→ page 39) | |
| | **Download from TV** (→ page 39) `For Continental Europe` | |
| **Disc** | **Settings for playback**<br>● Press [ENTER] to show the following settings. | |
| | **Ratings**<br>Set a ratings level to limit DVD-Video play.<br><br>Follow the on-screen instructions. Enter a 4-digit password with the numbered buttons when the password screen is shown.<br>● Do not forget your password. | ● <u>8 No Limit</u>: All DVD-Video can be played.<br>● 1 to 7:   Prohibits play of DVD-Video with corresponding ratings recorded on them.<br>● 0 Lock All:  Prohibits play of all DVD-Video.<br><br>● Unlock Recorder    ● Change Password<br>● Change Level     ● Temporary Unlock |
| | **DVD-Audio Video mode Playback**<br>Select "On" to play DVD-Video content on some DVD-Audio. | ● On:  The setting returns to "Off" when you change the disc or turn the unit off.<br>● <u>Off</u> |
| | **Soundtrack** `DVD-V`<br><br>● Some discs start in a certain language despite any changes you make here.<br>● Enter a code (→ page 37) when you selecting "Other ✳ ✳ ✳ ✳".<br>● `For Continental Europe` In case of English/French/German/Italian/Spanish/Dutch languages, when you make download from TV, and Country setting of Auto-Setup in plug-in, the language ("Soundtrack"/"Menus") will be same and "Subtitle" will set to "Automatic". | ● <u>English</u>  ● French  ● German  ● Italian  ● Spanish<br>● Dutch `For Continental Europe`<br>● Original:   The original language of each disc will be selected.<br>● Other ✳ ✳ ✳ ✳ |
| | **Subtitle** `DVD-V` | ● <u>Automatic</u>: If the language selected for "Soundtrack" is not available, subtitles of that language will automatically appear if available on that disc.<br>● English  ● French  ● German  ● Italian  ● Spanish<br>● Dutch `For Continental Europe`<br>● Other ✳ ✳ ✳ ✳ |
| | **Menus** `DVD-V` | ● <u>English</u>  ● French  ● German  ● Italian  ● Spanish<br>● Dutch `For Continental Europe`<br>● Other ✳ ✳ ✳ ✳ |
| | **Settings for recording**<br>● Press [ENTER] to show the following setting. | |
| | **Recording time in EP mode**<br>Select the maximum number of hours for recording in EP mode (→ page 15, Recording modes and approximate recording times). | ● EP ( 6Hours ):You can record for 6 hours on an unused 4.7 GB disc.<br>● <u>EP ( 8Hours )</u>:You can record for 8 hours on an unused 4.7 GB disc. |
| **Picture** | **Comb Filter**<br>Select the picture sharpness when recording.<br>The setting is fixed with "On" if you set "TV System" to "NTSC" (→ page 39). | ● <u>On</u>:  Pictures become clear and vivid. Normally, use this setting.<br>● Off:  Select it when recording noisy pictures. |
| | **Still Mode**<br>Select the type of picture shown when you pause play (→ page 41, Frames and fields). | ● <u>Automatic</u>:<br>● Field:   Select if jittering occurs when "Automatic" is selected.<br>● Frame:  Select if small text or fine patterns cannot be seen clearly when "Automatic" is selected. |

| Tabs | Menus | Options (Underlined items are the factory presets.) |
|---|---|---|
| **Sound** | **Dynamic Range Compression** `DVD-V` (Dolby Digital only)<br>Change the dynamic range for late night viewing. | ●On<br>●<u>Off</u> |
| | **Bilingual Audio Selection**<br>Select whether to record the main or secondary audio type when recording to DVD-R, DVD-RW (DVD-Video format) or +R.<br>You cannot select this when recording from an external source onto DVD-R, DVD-RW (DVD-Video format) or +R. Select the audio on the other equipment. | ●<u>M 1</u><br>●M 2 |
| | **Digital Audio Output**<br>Change the settings when you have connected equipment through this unit's DIGITAL AUDIO OUT terminal (➔ page 9).<br>Output is not digital with DVD-Audio. `DVD-A`<br>●Press [ENTER] to show the following settings. | |

|  | | |
|---|---|---|
| **PCM Down Conversion**<br>Select how to output audio with a sampling frequency of 96 kHz.<br>●Signals are converted to 48 kHz despite the settings across if the signals have a sampling frequency of 96 kHz with a disc that has copy protection. | | ●On:  Converted to 48 kHz for output. Select if the equipment you connect cannot process signals with a sampling frequency of 96 kHz.<br>●<u>Off:</u>  Signals are output as 96 kHz. (Choose when the connected equipment can process signals with a sampling frequency of 96 kHz.) |
| **Dolby Digital**<br>`DOLBY DIGITAL` | Select how to output the signal.<br>If "Bitstream" is selected, the connected equipment decodes the signal.<br>If "PCM" is selected, this unit decodes the signal and output it as 2 channel. | ●<u>Bitstream</u>: When connecting to equipment displaying the Dolby Digital logo.<br>●PCM:  When connecting to equipment not displaying the Dolby Digital logo. |
| **DTS**<br>`DIGITAL dts SURROUND` | | ●<u>Bitstream</u>: When connecting to equipment displaying the DTS logo.<br>●PCM:  When connecting to equipment not displaying the DTS logo. |
| **MPEG** | **Note**<br>Not making the proper settings may result in noise or some trouble for digital recording. To avoid damaging your hearing and speakers, turn down the volume level. | ●Bitstream: When connected to equipment with a built-in MPEG decoder.<br>●<u>PCM</u>:  When connected to equipment without a built-in MPEG decoder. |

| Tabs | Menus | Options |
|---|---|---|
| **Display** | **On-Screen Messages**<br>Choose whether to show status messages automatically. | ●<u>Automatic</u><br>●Off |
| | **Grey Background**<br>Select "Off" if you do not want to have the unit show the grey background when tuner reception is weak. | ●<u>On</u><br>●Off |
| | **FL Display**<br>Changes the brightness of the unit's display.<br>This setting is fixed with "Automatic" if you set "Power Save" to "On". | ●<u>Bright</u>    ●Dim<br>●Automatic: The display turns dark during play, and reappears momentarily when you press a button. When the unit is turned off, all displays disappear. While using this mode, the standby power consumption can be reduced. |
| **Connection** | **TV Aspect** (➔ page 13) | ●16:9        ●<u>4:3</u>            ●Letterbox |
| | **Progressive** (➔ page 13)<br>This setting is fixed with "Off" if you set "AV1 Output" to "RGB (without component)". | ●On            ●<u>Off</u> |
| | **TV System** (➔ page 39) | ●<u>PAL</u>          ●NTSC |
| | **AV1 Output**<br>Selects the output from the AV1 terminal.<br>Select "RGB (without component)" for RGB output.<br>Select "Video (with component)" or "S Video (with component)" for component output. | ●<u>Video (with component)</u><br>●S Video (with component)<br>●RGB (without component) |
| | **AV2 Settings** `For Continental Europe`<br>Set to match the connected equipment.<br>●Press [ENTER] to show the following settings. | |

|  | | |
|---|---|---|
| **AV2 Input**<br>Set to "RGB/Video" when receiving or recording RGB output from external equipment. | | ●<u>RGB/Video</u><br>●RGB<br>●Video<br>●S Video |
| **AV2 Connection**<br>This setting is fixed with "Ext" if you set "TV System" to "NTSC" (➔ page 39). | | ●Decoder:  When a decoder is connected to decode scrambled signal (e.g., C+ decoder).<br>●<u>Ext</u>:  When the VCR or a digital/satellite receiver is connected. |
| **Ext Link**<br>This setting cannot be made when the "TV System" is set to "NTSC" (➔ page 39). | | ●Ext Link 1: When a digital receiver which transmits a special control signal recordings via the 21-pin Scart cable is connected.<br>●<u>Ext Link 2</u>: When an external equipment with a timer function is connected. |

| | | |
|---|---|---|
| **AV2 Input** `For Australia, N.Z., Asia and Middle East`<br>Set to "RGB/Video" when receiving or recording RGB output video from external equipment. | | ●<u>RGB/Video</u><br>●RGB<br>●Video<br>●S Video |

| Tabs | Menus | Options (Underlined items are the factory presets.) |
|------|-------|-----------------------------------------------------|
| Others | **Remote Control** (→ page 14) | ●<u>DVD 1</u>   ●DVD 2   ●DVD 3 |
| | **Clock** | |
| |     **Auto Clock Setting** (→ page 40) `For Continental Europe` | |
| |     **Manual Clock Setting** (→ page 40) | |
| | **Power Save**<br>●Refer to the following when "Power Save" is set to "On".<br>  –"FL Display" is automatically set to "Automatic" (→ page 36).<br>  –"Quick Start" function does not work (automatically set to "Off").<br>  –This function does not work in the timer recording standby mode.<br>`For Continental Europe`<br>  –When the unit is off, Pay TV programmes cannot be watched on the TV because the signal from the connected decoder is not looped through. To watch them, turn on the unit. | ●On:  Power consumption is minimized when the unit is turned to standby (→ page 41).<br>●<u>Off</u> |
| | **Quick Start**<br>A few seconds after turning on the unit, you can start recording to DVD-RAM.<br>Power consumption is also higher when the unit is turned off if this is set to "On".<br>●If this is set to "On", "Power Save" is automatically turned to "Off". | ●<u>On</u><br>●Off |
| | **Language** `For Continental Europe`<br>Choose the language for these menus and the on-screen messages. | ●<u>English</u>   ●Deutsch   ●Français   ●Italiano   ●Español<br>●Nederlands |
| | **Country** (→ page 12) `For Australia and N.Z.` | ●Australia   ●New Zealand   ●<u>Others</u> |
| | **Shipping Condition**<br>All the settings except for the ratings level, ratings password and time settings return to the factory preset. The timer recording programmes are also cancelled. | ●Yes<br>●<u>No</u> |
| | **Default Settings**<br>All the settings except for the programmed channels, time settings, country settings, language settings, disc language settings, ratings level, ratings password and remote control code return to the factory presets. | ●Yes<br>●<u>No</u> |

*Convenient fuctions*

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## Language code list   Enter the code with the numbered buttons.

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

RQT8020

ENGLISH

*Convenient fuctions*

## Tuning

**1** While stopped

**Press [FUNCTIONS].**

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

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

**4** **Press [▲, ▼] to select "Tuning" and press [▶].**

e.g., **Continental Europe**

```
SETUP        Manual
             Auto-Setup Restart
             Download from TV
Tuning
```
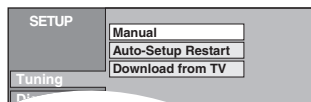
### Manual

You can add or delete channels, or change programme positions.

**5** **Press [▲, ▼] to select "Manual" and press [ENTER].**

```
               Manual Tuning
      Pos  Name  Ch   Pos  Name  Ch
       1   ARD   4    11    ─    ─
       2   ZDF   2    12    ─    ─
       3   N3    5    13    ─    ─
       4   HR3   8    14    ─    ─
       5   BR3   10   15    ─    ─
       6    ─    ─    16    ─    ─
SELECT 7    ─    ─    17    ─    ─
ENTER  8    ─    ─    18    ─    ─
       9    ─    ─    19    ─    ─
RETURN 10   ─    ─    20    ─    ─
      Delete  Move
       Add
      A  B  C
```
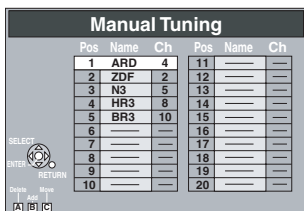
**To delete a programme position**
Press [▲, ▼, ◀, ▶] to select a programme position and press [A].

**To add a blank programme position**
Press [▲, ▼, ◀, ▶] to select a programme position and press [B].

**To move a TV station to another programme position**
① Press [▲, ▼, ◀, ▶] to select a programme position and press [C].
② Press [▲, ▼, ◀, ▶] to select the new programme position to which you want to assign the TV station and press [ENTER].

**Note**
**For Continental Europe**
If Preset Download (➔ page 10) has been performed, only deletion of the programme position can be performed.

### ■ To change the tuning settings for individual programme position

**6** **Press [▲, ▼, ◀, ▶] to select a programme position and press [ENTER].**

e.g., **Continental Europe**

```
Manual    Pos            1
Tuning    Name           ARD
          Channel        4
          Fine Tuning    Auto
CHANGE    Decoder        Off
          Video System   Auto
          Audio Mode     BG
RETURN    Mono           Off
          Title Page     301

     RETURN : leave
```

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

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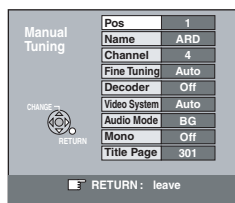
### ■ Available items for each model

**For Continental Europe**
●Pos ●Name ●Channel ●Fine Tuning ●Decoder ●Video System
●Audio Mode ●Mono ●Title Page

**For Australia and N.Z.**
●Pos ●Name ●Channel ●Fine Tuning ●Mono

**For Asia**
●Pos ●Name ●Channel ●Fine Tuning ●Video System ●Audio Mode
●Mono

**For Middle East**
●Pos ●Name ●Channel ●Fine Tuning ●Video System ●Mono

| | |
|---|---|
| **Pos** | **To change the programme position in which the TV stations are assigned** Press [▲, ▼] or numbered buttons to select the number of the desired programme position and press [ENTER]. |
| **Name** | **To enter or change the name of a TV station** Press [▲, ▼, ◀, ▶] to enter station name and press [ENTER]. If the station name needs a blank space, select the blank between "Z" and "✳". |
| **Channel** | **To enter newly available TV stations or change the channel number of an already tuned TV station** Press [▲, ▼] or the numbered buttons to enter the channel number of the desired TV station. Wait a few moments until the desired TV station has been tuned. After the desired TV station is tuned, press [ENTER]. |
| **Fine Tuning** | **To obtain the best tuning condition** Press [▲, ▼] to adjust the best tuning condition and press [ENTER]. ●Press [▶] to return to "Auto". |
| **Decoder** | **To preset pay TV stations** Press [▲, ▼] to select "On" and press [ENTER]. |
| **Video System** | **To select the video system type** Press [▲, ▼] to select "PAL" or "SECAM" if the picture lacks colour, and press [ENTER]. Auto: This unit automatically distinguishes PAL and SECAM signals. PAL: For receiving PAL signals. SECAM: For receiving SECAM signals. |
| **Audio Mode** | **To select the audio reception type** If sound quality is poor, press [▲, ▼] to select items and press [ENTER]. **For Continental Europe** BG: PAL B.G.H/SECAM B.G L: SECAM L,L'✳/PAL L **For Asia** BG: PAL B.G DK: PAL D.K.K1 I: PAL I |
| **Mono** | **To select the type of sound to be recorded** Press [▲, ▼] to select "On" if the stereo sound is distorted due to inferior reception conditions, or if you want to record the normal (mono) sound during a stereo, bilingual or NICAM✳ broadcast, and press [ENTER]. |
| **Title Page** | **To enter the Teletext title page for a channel** Entering title page number allows the unit to automatically record programme and station names. Press [▲, ▼] or numbered buttons to enter the number and press [ENTER]. ●To find the correct title page for the station, refer to its Teletext TV guide. |

You can make the following two settings by selecting the external input channel (AV1, AV2, AV3, AV4) in step 5.
●Video System (Auto/PAL/SECAM)
In order to record properly, make the appropriate settings to match the connected equipment.
●Title Page (Auto/Off)

✳ Not provided for Germany, Austria, Italy, Netherlands, Greece

### Auto-Setup Restart, Download from TV

You can restart auto channel setting if Preset Download or Auto-Setup (→ page 10–12) fails for some reason.

■ **Auto-Setup Restart**

**5** Press [▲, ▼] to select "Auto-Setup Restart" and press [ENTER].
The confirmation screen appears.

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

**7** For Continental Europe, Australia and N.Z.
Press [▲, ▼, ◄, ►] to select a country and press [ENTER].

■ **Download from TV** For Continental Europe

**5** Press [▲, ▼] to select "Download from TV" and press [ENTER].
The confirmation screen appears.

**6** Press [◄, ►] to select "Yes" and press [ENTER].
Download starts.

**To exit the screen**
Press [RETURN] several times.

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

**Tuner System/List of TV Reception Channels**
RF converter output: Not provided

**For Continental Europe**

| Tuner System | Channel Coverage | VHF | UHF | CATV |
|---|---|---|---|---|
| PAL-BGH, SECAM-BG | CCIR | E2-E12, A-H2 (Italy) | 21-69 | S01-S05 (S1-S3) S1-S20 (M1-U10) S21-S41 |
| SECAM-L,L'※ | France | 2-10 | 21-69 | B-Q (100.5–299.5 MHz) S21-S41 (299.5–467.25 MHz) |

※ Not provided for Germany, Austria, Italy, Netherlands, Greece

**For Australia and N.Z.**

| Tuner System | Channel Coverage | VHF | UHF | CATV |
|---|---|---|---|---|
| PAL-B | Australia | 0-12 | 28-69 | 45 MHz–470 MHz |
| PAL-BG | New Zealand | 1-11 | 21-69 | 44 MHz–470 MHz |

**For Asia**

| Tuner System | Channel Coverage | VHF | UHF | CATV |
|---|---|---|---|---|
| PAL-BGH, SECAM-BG | CCIR | E2-E12 | E21-E69 | S01-S05 M1-U10, U1-U10 S21-S41 |
| PAL-I | Hong Kong | – | 21-69 | – |
| PAL-DK, SECAM-DKK1 | OIRT | R1-R12 | 21-69 | 44 MHz–470 MHz |
| PAL-D | China | 1-12 | 13-57 | Z1-Z35 |

**For Middle East**

| Tuner System | Channel Coverage | VHF | UHF | CATV |
|---|---|---|---|---|
| PAL-BGH, SECAM-BG | CCIR | E2-E12 | E21-E69 | S01-S05 M1-U10, U1-U10 S21-S41 |

**List of TV Reception Channels** For Continental Europe

| Channel Indication | TV Channel | | |
|---|---|---|---|
| | Germany/Italy | France | Other Countries |
| 2-4 | | 2-4 | |
| 5-10 | E2-E10 | 5-10, G-J (172.00–220.00 MHz) (INTER BANDE) | E2-E12 |
| 11-12 | E11-E12 (Germany) H1-H2 (Italy) | – | |
| 13-20 | A-H (Only Italy) | – | – |
| 21-69 | E21-E69 | E21-E69 | E21-E69 |
| 74-78 | S01-S05 | – | S1-S5 |
| 80 | S1 | – | M1 |
| 81-89 | S2-S10 | B-F (100.00–172.00 MHz) (INTER BANDE) | M2-M10 |
| 90-99 | S11-S0 | K-Q (220.00–300.00 MHz) (INTER BANDE) | U1-U10 |
| 121-141 | S21-S41※ (Hyperband) | S21-S41 (299.25–467.25 MHz) (INTER BANDE) | S21-S41 (Hyperband) |

※ Only for 8 MHz channel raster

## TV System

Change this setting if you connect an NTSC television or to record NTSC video from another source.

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

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

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

**4** Press [▲, ▼] to select "Connection" and press [►].

**5** Press [▲, ▼] to select "TV System" and press [ENTER].

**6** Press [▲, ▼] to select the TV system and press [ENTER].

| SETUP | TV System |
|---|---|
| | PAL |
| Tuning | NTSC |
| Disc | |
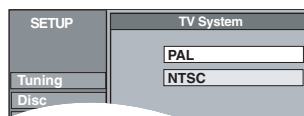
● **PAL (factory preset)**
– Select when connecting to a PAL or Multi-system television. Programmes recorded using NTSC are played as PAL 60.
– Select to record television programmes and PAL input from other equipment.

● **NTSC**
– Select when connecting to a NTSC television. Television programmes cannot be recorded properly.
– Select to record NTSC input from other equipment.

The confirmation screen appears.

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

**To exit the screen**
Press [RETURN] several times.

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

■ **To change the setting all at once (PAL←→NTSC)**

While stopped, press and hold [■] and [▲ OPEN/CLOSE] on the main unit at the same time for about 5 seconds.

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## Clock settings

For Continental Europe
- Usually, the unit's Preset Download or Auto-Setup function (→ page 10, 11) automatically adjusts the clock to correct time. Under some reception conditions, however, the unit cannot set the clock automatically.
- In this case, follow the operation steps below to manually set the clock.

- In the case of a power failure, the clock setting remains in memory for approximately 60 minutes.

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

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

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

**4** **Press [▲, ▼] to select "Others" and press [▶].**

**5** **Press [▲, ▼] to select "Clock" and press [ENTER].**

---

### Auto Clock Setting  For Continental Europe

If a TV station transmits a time setting signal, and when "Automatic" in the Clock setting menu is set to "On", the automatic time correction function checks the time and if necessary it is adjusted several times every day.

**6** **Press [▲, ▼] to select "On" of "Automatic" and press [ENTER].**
Auto clock setting starts.

The following screen appears when setting is complete.

```
               Clock
                          Automatic  On
   Time                Date
   15 : 45 : 39        1 . 8 . 2005

   CHANGE
   ENTER          Automatic clock setting completed.
   RETURN         ENTER: access    RETURN: leave
```
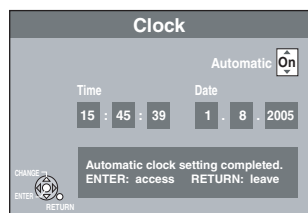
**To stop partway**
Press [RETURN].
- If the unit cannot set the clock automatically, set the clock manually (→ right, "Manual Clock Setting" Step 6).

---

### Manual Clock Setting

**e.g.,**  Continental Europe

```
               Clock
                          Automatic  Off
   Time                Date
   15 : 45 : 39        1 . 8 . 2005

   No.
   0   9
   CHANGE    SELECT
   ENTER          Please set clock manually.
   RETURN         ENTER: store    RETURN: leave
```
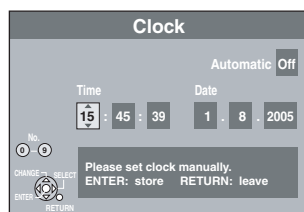
**6**  For Continental Europe
**Press [▲, ▼] to select "Off" of "Automatic" and press [ENTER].**

**7** **Press [◄, ►] to select the item you want to change.**
The items change as follows:
Hour ⟷ Minute ⟷ Second ⟷ Day ⟷ Month ⟷ Year

**8** **Press [▲, ▼] to change the setting.**
You can also use the numbered buttons for setting.

**9** **Press [ENTER] when you have finished the settings.**
The clock starts.

---

**To exit the screen**
Press [RETURN] several times.

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

---

## Child Lock

**e.g.,**  Continental Europe
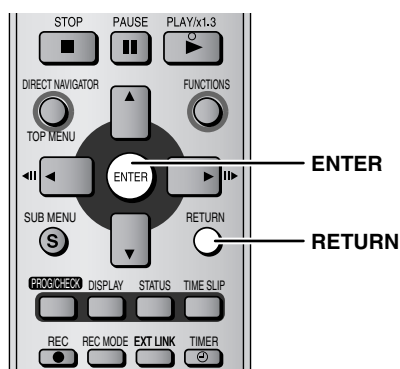


The Child Lock deactivates all buttons on the unit and remote control. Use it to prevent other people from operating the unit.

### Press and hold [ENTER] and [RETURN] simultaneously until "X HOLD" appears on the unit's display.

If you press a button while the Child Lock is on, "X HOLD" appears on the unit's display and operation is impossible.

**To cancel the Child Lock**
Press and hold [ENTER] and [RETURN] simultaneously until "X HOLD" disappears.

# Specifications

**Recording System**  DVD Video Recording format (DVD-RAM), DVD-Video format (DVD-R), DVD-Video format (DVD-RW)

**Recordable discs**
DVD-RAM :  Ver. 2.0
  Ver. 2.1/3×–SPEED DVD-RAM Revision 1.0
  Ver. 2.2/5×–SPEED DVD-RAM Revision 2.0
DVD-R :  for General Ver. 2.0
  for General Ver. 2.0/4×–SPEED DVD-R Revision 1.0
  for General Ver. 2.x/8×–SPEED DVD-R Revision 3.0
DVD-RW :  Ver. 1.1
  Ver. 1.1/2×–SPEED DVD-RW Revision 1.0
  Ver. 1.2/4×–SPEED DVD-RW Revision 2.0
+R :  Ver. 1.0
  Ver. 1.1
  Ver. 1.2

**Recording Time**
Maximum 8 hours (with 4.7 GB disc)
XP: Approx. 1 hour    SP: Approx. 2 hours
LP: Approx. 4 hours    EP: Approx. 6 hours/8 hours

**Playable discs**
DVD-RAM, DVD-R, DVD-RW, +R,
+RW, DVD-VIDEO, DVD-AUDIO, CD-AUDIO (CD-DA), Video CD,
CD-R/RW (MP3, CD-DA, Video CD, JPEG formatted discs)

**LASER Specification**
Class 1 LASER Product
Wave Length:  795 nm (CDs), 662 nm (DVDs)
Laser Power:
  No hazardous radiation is emitted with the safety protection

**NORSK**
Bølgelengde:  795 nm (CD), 662 nm (DVD)
Laserstyrke:  Ingen farlig stråling sendes ut

**Audio**
Recording System:  Dolby Digital 2ch
Audio In:  AV1/AV2 (21 pin), AV3/AV4 (pin jack)
Input Level:  Standard: 0.5 Vrms, Full scale: 2.0 Vrms at 1 kHz
Input Impedance:  More than 10 kΩ
Audio Out:  AV1/AV2 (21 pin), Audio Out (pin jack)
Output Level:  Standard: 0.5 Vrms, Full scale: 2.0 Vrms at 1 kHz
Output Impedance:  Less than 1 kΩ
Digital Audio Out: Optical terminal (PCM, Dolby Digital, DTS, MPEG)
**Television System (→ page 39)**
**Video**
Video System:
`For Continental Europe, Asia and Middle East`
  SECAM (only input)/PAL colour signal, 625 lines, 50 fields
  NTSC colour signal, 525 lines, 60 fields

`For Australia and N.Z.`  PAL colour signal, 625 lines, 50 fields
  NTSC colour signal, 525 lines, 60 fields
Recording System:  MPEG2 (Hybrid VBR)
`For Continental Europe, Asia and Middle East`
Video In (SECAM/PAL/NTSC):
  AV1/AV2 (21 pin), AV3/AV4 (pin jack) 1 Vp-p 75 Ω, termination
`For Australia and N.Z.`
Video In (PAL/NTSC):
  AV1/AV2 (21 pin), AV3/AV4 (pin jack) 1 Vp-p 75 Ω, termination
`For Continental Europe, Asia and Middle East`
S-Video In (SECAM/PAL/NTSC):
  AV2 (21 pin), AV3/AV4 (S terminal) 1 Vp-p 75 Ω, termination
`For Australia and N.Z.`
S-Video In (PAL/NTSC):
  AV2 (21 pin), AV3/AV4 (S terminal) 1 Vp-p 75 Ω, termination
RGB In (PAL):
  AV2 (21 pin) 0.7 Vp-p (PAL) 75 Ω, termination
Video Out (PAL/NTSC):
  AV1/AV2 (21 pin), Video Out (pin jack) 1 Vp-p 75 Ω, termination
S-Video Out (PAL/NTSC):
  AV1 (21 pin), S-Video Out (S terminal) 1 Vp-p 75 Ω, termination
RGB Out (PAL/NTSC):
  AV1 (21 pin) 0.7 Vp-p (PAL) 75 Ω, termination
Component video output (NTSC 480p/480i, PAL 576p/576i)
  Y: 1.0 Vp-p 75 Ω, termination
  $P_B$: 0.7 Vp-p 75 Ω, termination
  $P_R$: 0.7 Vp-p 75 Ω, termination

**Others**
Region Code:
`For Continental Europe and Middle East`  # 2
`For Australia and N.Z.`  # 4
`For Asia`  # 3
Operating Temperature:  5–40 °C
Operating Humidity range:  10–80 % RH (no condensation)
Power supply:
`For Continental Europe, Australia and N.Z.`  AC 220–240 V, 50 Hz
`For Asia and Middle East`  AC 220–240 V, 50/60 Hz
Power consumption:  23 W
Dimensions (W×D×H):  Approx. 430 mm × 337 mm × 63 mm
Mass:  Approx. 3.5 kg

> **Power consumption in standby mode:**
> **approx. 3 W (Power Save mode)**

`Note`
Specifications are subject to change without notice.
Mass and dimensions are approximate.

---

# Glossary

**Bitstream**
This is the digital form of multi-channel audio data (e.g., 5.1 channel) before it is decoded into its various channels.

**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 on some discs into two channels for stereo output. It is useful when you want to listen to the 5.1-channel audio recorded on DVDs through your television's speakers. Some discs prohibit down-mixing and this unit can then only output the front two channels.

**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.
For PAL
Film is 25 frames per second.
Video is 50 fields per second (two fields making up one frame).
For NTSC
Film is 24 or 30 frames per second, with motion picture film generally being 24 frames per second.
Video is 60 fields per second (two fields making up one frame).

**Finalize**
A process that makes play of a recorded CD-R, CD-RW, DVD-R etc. possible on equipment that can play such media. You can finalize DVD-R, DVD-RW (DVD-Video format) or +R on this unit.
After finalizing, the disc becomes play-only and you can no longer record or edit. You can record after formatting although it becomes play-only after finalizing, when you use DVD-RW.

**Formatting**
Formatting is the process of making media such as DVD-RAM recordable on recording equipment.
You can format DVD-RAM or DVD-RW (only as DVD-Video format) on this unit.
Formatting erases irrevocably 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
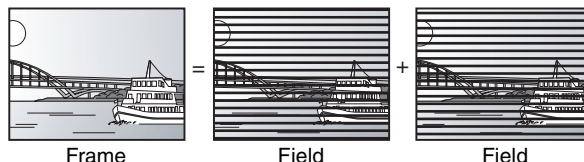
● A frame still shows two fields, so there may be some blurring, but picture quality is generally better.
● A field still shows less picture information so it may be rougher, but there is no blurring.

**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.

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**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.
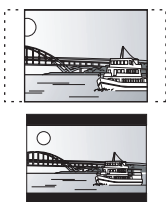
Letterbox: Black bands appear at the top and bottom of the picture so the picture itself appears in an aspect ratio of 16:9.

**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**

The PAL video signal standard has 625 (or 576) interlaced (i) scan lines, whereas progressive scanning, called 625p (or 576p), uses twice the number of scan lines. For the NTSC standard, these are called 525i (or 480i) and 525p (or 480p) respectively.

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. Panasonic televisions with 625 (576)/50i · 50p, 525 (480)/60i · 60p input terminals are progressive compatible.

**Protection**

You can prevent accidental erasure by setting writing protection or erasure protection.

**Sampling frequency**

Sampling is the process of converting the heights of sound wave (analog signal) samples taken at set periods into digits (digital encoding). Sampling frequency is the number of samples taken per second, so larger numbers mean more faithful reproduction of the original sound.

**Thumbnail**

This refers to a miniature representation of a picture used to display multiple pictures in the form of a list.

**TIFF (Tag Image File Format)**

This is a system used for compressing/decoding color still pictures. A common format for storing high quality images on digital cameras and other devices.

---

**Q Link** `For Continental Europe`

This function works only if the unit is connected via a fully wired 21-pin Scart cable to a TV featuring the Q Link or similar function. Q Link offers the following functions:

● Download from the TV※

When you connect the unit to a TV, the station list data is automatically copied from the TV to the unit, and the TV stations are assigned to the programme positions on the unit in the same order as on the TV.

● Direct TV Recording

By simply pressing [● DIRECT TV REC], you can at once record the same programme that you are watching on the TV.

● TV/DVD Auto On※

Even if the TV and the unit are off (standby mode), pressing [▶] (PLAY), [DIRECT NAVIGATOR, TOP MENU], [ShowView] or [PROG/CHECK] automatically turns on both the TV and the unit. If the TV is off (standby mode) and the unit is on, when you press [FUNCTIONS] or [▶] (PLAY), or insert the disc [except DVD-RAM, DVD-R, DVD-RW (DVD-Video format) and +R], the TV automatically is turned on.

● DVD Auto Standby※

When you turn the TV off, the unit is turned off as well. However, this function works in the stop mode.

This function does not work during the following operations: Preset Download, Auto-Setup, Auto Clock Setting and Manual Tuning.

● On-Screen Messages※

When you are watching a TV programme, the following messages appear on the TV screen to inform you of the unit's condition:

| Message | Message appears when: |
|---|---|
| This programme has already started | A timer recording has just started. |
| Set DVD to timer standby mode | The unit is not in the timer standby mode 10 minutes before the programmed recording start time (message appears every minute during these 10 minutes). |
| DVD is in timer recording mode | [● REC] on the main unit or [ShowView] was pressed while the unit is in the timer recording mode. |

Depending on the type of TV used, the above messages may not appear correctly.

※ These operations are only available if the unit is connected to a TV featuring the Q Link function.

**VPS (Video Programme System)/PDC (Programme Delivery Control)** `For Continental Europe`

VPS or PDC is a very convenient system which records exactly from beginning to end of the TV programmes set in timer recording, even if the actual broadcasting time differs from the scheduled time due to delayed start or extension of the programme duration. Also, if a programme is interrupted, for example, some special news is inserted, the recording will be paused automatically and resumed when the programme continues. Depending on the signals sent from the TV stations, the VPS/PDC system may not work properly even when "VPS/PDC" has been set to "ON". Please check with the broadcasters in your area for details.

● In the case of VPS/PDC recording, use the correct time (VPS/PDC time) for recording the TV programmes.
Set "VPS/PDC" to "OFF" when the recording time is not the correct time (VPS/PDC time).
VPS/PDC recording is not performed when the time (VPS/PDC time) is incorrect, even if only by one minute. To find out the correct time (VPS/PDC time), consult Teletext, a newspaper or magazine, or other source.

● If the actual broadcasting times of timer recordings overlap (regardless of whether they are VPS/PDC controlled), the recording that starts first always has priority, and the recording of the later programme will start only after the first timer recording has finished.

● When the VPS/PDC signal drops out because the broadcast signal is weak, or when a TV station does not transmit a regular VPS/PDC signal, the timer recording will be performed in the normal mode (without VPS/PDC) even if it was programmed for VPS/PDC.
In this case, even if the timer recording is performed, whatever has been programmed will not be cancelled at that particular time but at 4 a.m. two days later.

● The start times of scheduled programmes listed in the newspaper or magazine may be changed at a later date. Set "VPS/PDC" to "OFF" when programming a programme whose start time has been subsequently changed. Particular care must be taken in this respect with SHOWVIEW programming since "VPS/PDC" is automatically set to "ON" in some countries (→ below).

● If a programme listed in a newspaper or magazine has two SHOWVIEW numbers, use the SHOWVIEW number for VPS/PDC if you wish to proceed with VPS/PDC recording using SHOWVIEW programming.

● The default settings for "VPS/PDC" differ depending on the country concerned. Refer to the following table.

| | When SHOWVIEW programming | When the SHOWVIEW programming start time is changed | When programming manually |
|---|---|---|---|
| **Belgium, Netherlands, Sweden, Denmark, Finland, Norway, France** | ON | OFF | OFF |
| **Germany, Switzerland, Austria** | ON | ON | ON |
| **Italy, Spain, Portugal, Greece, Other Countries** | OFF | OFF | OFF |

● If the broadcasting station is not transmitting VPS/PDC signals, "---" appears in the menu for timer programming under "VPS/PDC".

● The beginnings of recordings may not be recorded correctly in some cases.

# Frequently asked questions

## Set up

| | | Page |
|---|---|---|
| What equipment is necessary to play multi channel surround sound? | • DVD-Video:<br>  You can play DVD-Video multi channel surround by digitally connecting an amplifier equipped with a Dolby Digital, DTS or MPEG decoder.<br>• DVD-Audio:<br>  Output is not digital with DVD-Audio. | **9**<br><br>— |
| Are the headphones and speakers directly connected to the unit? | • You cannot directly connect to the unit. Connect through the amplifier etc. | **9** |
| The television has a Scart terminal and component video input terminal. Which terminal should I connect with? | • If you have a regular television (CRT: cathode ray tube) we recommend using the Scart terminal. You can enjoy high-quality RGB video from this unit by connecting to an RGB compatible television.<br>If you have an LCD/plasma television or LCD projector compatible with progressive scan, connect through the component video terminals for high-quality progressive video.<br>If you have a CRT television that is compatible with progressive scan, we cannot recommend progressive output as some flickering can occur. | **7, 8** |
| Is my television progressive output compatible? | • All Panasonic televisions that have 625 (576)/50i · 50p, 525 (480)/60i · 60p input terminals are compatible. Consult the manufacturer if you have another brand of television. | — |

## Disc

| | | Page |
|---|---|---|
| Can I play DVD-Video, DVD-Audio and Video CDs bought in another country? | • You cannot play DVD-Video if their region number are not supported by this player. | **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-RW, +R and +RW compatibility with this unit. | • This unit records and plays DVD-R, DVD-RW (DVD-Video format) and +R, and plays DVD-RW (DVD Video Recording format) and +RW.<br>• This unit also records and plays high speed recording compatible DVD-R, DVD-RW, +R discs. | **4, 5**<br><br>— |
| 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).<br>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).<br>• You cannot write to a CD-R or CD-RW with this unit. | **5, 24**<br><br>— |

## Recording

| | | Page |
|---|---|---|
| Can I record from a commercially purchased video cassette or DVD? | • Most commercially sold video cassettes and DVD are copy protected; therefore, recording is usually not possible. | — |
| Can DVD-R, DVD-RW (DVD-Video Format) and +R recorded on this unit be played on other equipment? | • You can play on compatible equipment such as DVD players after finalizing the disc on this unit. However depending on the condition of the recording, the quality of the disc and capabilities of the DVD player, play may not be possible. | **33** |
| Can I record digital audio signals using this unit? | • You cannot record digital signals. The digital audio terminals on this unit are for output only. | — |
| Can a digital audio signal from this unit be recorded to other equipment? | • You can record if using the PCM signal. When recording DVD, change the "Digital Audio Output" settings to the following from the SETUP menu.<br>– PCM Down Conversion:　 On<br>– Dolby Digital/DTS/MPEG:　 PCM<br>However, only<br>– As long as digital recording from the disc is permitted.<br>– As long as the recording equipment is compatible with a sampling frequency of 48 kHz.<br>• You cannot record MP3 signals.<br>• Output is not digital with DVD-Audio. | **36**<br><br><br><br><br>—<br>— |
| Can I switch to bilingual broadcast during recording? | • With DVD-RAM, you can. Just press [AUDIO].<br>• With DVD-R, DVD-RW (DVD-Video format) or +R, you cannot. Change before recording with the "Bilingual Audio Selection" in the SETUP menu. | —<br>**36** |

# Optional Accessories

Product numbers correct as of January 2005. These may be subject to change.

| **DVD-RAM** | 9.4 GB, double-sided, type 4 cartridge: | LM-AD240ME | (compatible with high speed recording 5X) |
|---|---|---|---|
| | | LM-AD240LE | (compatible with high speed recording 3X) |
| | 4.7 GB, single-sided, type 2 cartridge: | LM-AB120ME | (compatible with high speed recording 5X) |
| | | LM-AB120LE | (compatible with high speed recording 3X) |
| | 4.7 GB, single-sided, non-cartridge: | LM-AF120ME | (compatible with high speed recording 5X) |
| | | LM-AF120LE | (compatible with high speed recording 3X) |
| **DVD-R** | 4.7 GB, single-sided, non-cartridge: | LM-RF120ME | (compatible with high speed recording 8X) |
| | | LM-RF120LE | (compatible with high speed recording 4X) |

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# Error messages

## On the television

Page

| Cannot finish recording completely. | • The programme was copy-protected. | — |
| | • The disc may be full. | — |
| | • There are already 99 recorded titles (**+R** 49 recorded titles). | — |
| Cannot playback. TV system is different from the setting. To playback, please change the TV System in SETUP. | • You tried to play a title recorded using a different encoding system from that of the TV system currently selected on the unit. Alter the "TV System" setting on this unit to suit. | 39 |
| Cannot record on the disc. | • The disc may be dirty or scratched. | 5 |
| Unable to format. | | |
| Please check the disc. | | |
| Cannot record. Disc is full. | • Create space by erasing any unnecessary titles. **RAM** **-RW(V)** (Even if you erase recorded content from the DVD-R or the +R, there is no increase in disc space.) | 23, 29, 32 |
| Cannot record. Maximum numbers of titles exceeded. | • Use a new disc. | — |
| Error has occurred. Please press ENTER. | • Press [ENTER] to start recovery process. You cannot operate the unit while it is recovering ("SELF CHECK" appears on the unit's display). | — |
| No disc | • The disc may be upside down. | — |
| Please change the disc. | • There may be a problem with the disc. Press [▲ OPEN/CLOSE] to remove it and check it for scratches or dirt. (The unit turns off automatically after you open the tray.) | 5 |
| This is a non-recordable disc. | • The unit cannot record on the disc you inserted. Insert a DVD-RAM or unfinalized DVD-R, DVD-RW (DVD-Video format) or +R. | 4, 5 |
| This disc is not formatted properly. | • You inserted an unformatted DVD-RAM or DVD-RW. Format the disc with this unit. | 33 |
| ⊘ | • The operation is prohibited by the unit or disc. | — |

## On the unit's display

| REMOTE DVD ☐ (" ☐ " 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. | 14 |
| HARD ERR | • If there is no change after turning the unit on and off, consult the dealer where the unit was purchased. | — |
| NO READ | • The disc is dirty or badly scratched. The unit cannot record, play, or edit. | 5 |
| | • The message may appear when the lens cleaner has finished cleaning. Press [▲ OPEN/CLOSE] to eject the disc. | — |
| PROG FULL | • There are already 16 timer programmes. Delete unnecessary timer programmes. | 21 |
| SELF CHECK | • There was a power failure or the AC plug was disconnected while the unit was on. The unit is carrying out its recovery process. Wait until the message disappears. | — |
| | • If "Quick Start" is set to "On", "PLEASE WAIT" is displayed while the unit is carrying out its recovery process. You cannot operate the unit while "PLEASE WAIT" is displayed. | — |
| UNSUPPORT | • You have inserted a disc the unit cannot play or record on. | 4, 5 |
| UNFORMAT | • You have inserted a DVD-RAM or DVD-RW that is unformatted or recorded on other equipment. | 33 |
| U59 | • The unit is hot. The unit switches to standby for safety reasons. Wait for about 30 minutes until the message disappears. Select a position with good ventilation when installing the unit. Do not block the vent on the rear of the unit. | — |
| U99 | • The unit fails to operate properly. Press [⏻/I] on the main unit to switch the unit to standby. Now press [⏻/I] on the main unit again to turn the unit on. | — |
| X HOLD | • The Child Lock function is activated. Press and hold [ENTER] and [RETURN] simultaneously until "X HOLD" disappears. | 40 |

# Maintenance

**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, read the instructions that came with the cloth carefully.

**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 **lens cleaner** about once every year, depending on frequency of use and the operating environment. Read the lens cleaner's instructions carefully before use.

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

# Troubleshooting guide

Before requesting service, make the following checks. If you are in doubt about some of the check points, or if the remedies indicated in the chart do not solve the problem, consult your dealer for instructions.

**The following do not indicate a problem with this unit:**

| |
|---|
| ● Regular disc rotating sounds. The sound of the disc rotating may become louder especially when finalizing a DVD-R, DVD-RW (DVD-Video format) or +R. <br> ● Poor reception due to atmospheric conditions. <br> ● Image disturbance during search. | ● Interruptions in reception due to periodic satellite broadcasting breaks. <br> ● Operations do not work due to a poor-quality disc. (Try again using a Panasonic disc.) <br> ● The unit freezes due to one of its safety devices being activated. (Press and hold [⏻/l] on the main unit for 10 seconds.) |

### Power

| | | Page |
|---|---|---|
| **No power.** <br><br> **Unit does not turn on pressing [⏻ DVD].** | ● Insert the AC mains lead securely into a known active AC mains socket. <br> ● Timer recording is in recording standby. Press [⊙ TIMER] to cancel the recording standby. <br> ● For Continental Europe Linked timer recordings with external equipment is in recording standby. Press [EXT LINK] to cancel the recording standby. | **7, 8** **18–20** **21** |
| **The unit switches to the standby mode.** | ● One of the unit's safety devices is activated. Press [⏻/l] on the main unit to turn the unit on. | — |

### Displays

| | | |
|---|---|---|
| **The display is dim.** | ● Change "FL Display" in the SETUP menu. | **36** |
| **"0:00" is flashing on the unit's display.** | ● Set the clock. | **40** |
| **The clock is not correct.** <br> For Continental Europe | ● Under adverse reception conditions, etc., the automatic time correction function may not work. In this case, "Automatic" is automatically turned to "Off". If re-setting the Auto Clock Setting does not work, set the time manually. | **40** |
| **The time recorded on the disc and the available time shown do not add up.** <br> **The play time shown for MP3 does not agree with the actual time.** | ● Times shown may disagree with actual times. <br> ● Even if you erase recorded content from the DVD-R or the +R, there is no increase in disc space. <br> ● Available recording space on a DVD-RW (DVD-Video format) increases only when the last recorded title is erased. It does not increase if other titles are erased. <br> ● More disc space than the actual recording time is used after recording or editing the DVD-R or the +R 200 times or more. <br> ● While searching, the elapsed time may not display correctly. | — <br> — <br> — <br><br> — <br><br> — |

### TV screen and video

| | | |
|---|---|---|
| **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. | — |
| **Status messages do not appear.** | ● Select "Automatic" in "On-Screen Messages" in the SETUP menu. | **36** |
| **The grey background does not appear.** | ● Select "On" in "Grey Background" in the SETUP menu. | **36** |
| **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 Picture menu to "Off". <br> ● Check the settings for "TV Aspect" in the SETUP menu. | **27** <br><br> **13** |
| **There is a lot of after-image when playing video.** | ● Set "Playback NR" in the Picture menu to "Off". | **27** |
| **When playing DVD-Video using progressive output, one part of the picture momentarily appears to be doubled up.** | ● Set "Progressive" in the Picture 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. | **27** |
| **There is no apparent change in picture quality when adjusted with the Picture menu in the on-screen menus.** | ● The effect is less perceivable with some types of video. | — |
| **The images from this unit do not appear on the television.** <br><br> **Picture is distorted.** | ● Make sure that the television is connected to the AV1 terminal, VIDEO OUT terminal, S VIDEO OUT terminal or COMPONENT VIDEO OUT terminals on this unit. <br> ● Make sure that the television's input setting (e.g., AV1) is correct. <br> ● The television isn't compatible with progressive signals. Press and hold [■] and [▶ (PLAY/x1.3)] on the main unit at the same time for about 5 seconds. The setting will change to interlace. | **7, 8** <br><br> — <br> — |

### Sound

| | | |
|---|---|---|
| **No sound.** <br> **Low volume.** <br> **Distorted sound.** <br> **Cannot hear the desired audio type.** | ● Check the connections and settings. Check the input mode on the amplifier if you have connected one. <br> ● Press [AUDIO] to select the audio. <br> ● Turn off V.S.S. in the following cases. <br> –When using discs that do not have surround sound effects such as Karaoke discs. <br> –When playing bilingual broadcast programmes. <br> ● The disc may have a restriction on the method of audio output. If "D. MIX" does not appear in the display when playing multi-channel DVD-Audio, only audio for the two front channels will be output. Refer to the disc's jacket. <br> ● Output is not digital with DVD-Audio. | **7–9, 36** <br><br> **22** <br> **27** <br><br><br> — <br><br><br> — |
| **Cannot switch audio.** | ● You cannot change the audio type when a DVD-R, a DVD-RW (DVD-Video format) or a +R is in the disc tray. <br> ● You cannot change the audio type when playing a DVD-R, a DVD-RW (DVD-Video format) or a +R. (You can select "M 1" or "M 2" in "Bilingual Audio Selection" in the SETUP menu before recording.) <br> ● You have used digital connection. Set "Dolby Digital" to "PCM" or connect using audio cables (analog connection). <br> ● There are discs which audio cannot be changed because of how the disc was created. | — <br><br> **36** <br><br><br> **9, 36** <br><br> — |

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ENGLISH

*Reference*

| Operation | | Page |
|---|---|---|
| **Cannot operate the television. The remote control doesn't work.** | • Change manufacturer code. Some televisions cannot be operated even if you change the code. | 14 |
| | • The remote control and main unit are using different codes. Change the code on the remote control. | 14 |
| | ### REMOTE DV DA  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. | 3 |
| | • Coloured 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. | — |
| | • The child lock function is activated. | 40 |
| **The unit is on but cannot be operated.** | • 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: Press [⏻/I] on the main unit to switch the unit to standby. If the unit doesn't switch to standby, press and hold [⏻/I] on the main unit for about 10 seconds. The unit is forcibly switched to standby. Alternatively, disconnect the AC mains lead, wait one minute, then reconnect it. | — |
| **Cannot eject disc.** | • Timer recording is in recording standby. Press [⏱ TIMER] to cancel the recording standby. | 18–20 |
| | • For Continental Europe Linked timer recordings with external equipment is in recording standby. Press [EXT LINK] to cancel the recording standby. | 21 |
| | • 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. | — |
| | • If the Child Lock function is activated, above operation does not work. Cancel the Child Lock function. | 40 |
| **Cannot tune channels.** **Cannot download channel presets.** For Continental Europe | • Check the connections. | 7, 8 |
| | • For Continental Europe You must connect to a television equipped with the Q Link function with a fully wired 21-pin Scart cable to download channel presets. | 7 |
| **Startup is slow.** | • Make sure that "Quick Start" is set to "On". Even if "Quick Start" is set to "On", startup is slow if the clock is not set, there was a power failure or the AC plug has just been connected. | 37 |
| | • A few dozen seconds after turning on the unit, you can play a disc or start recording to discs other than DVD-RAM. | — |
| | • Startup takes time for a few minutes after 5:15 am due to system maintenance of this unit. | — |

**Recording and timer recording**

| | | |
|---|---|---|
| **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. | 4, 5 |
| | • The disc is unformatted. Format the disc. RAM -RW(V) | 33 |
| | • The write-protect tab on the cartridge is set to PROTECT, or the disc is protected with DISC MANAGEMENT. | 32 |
| | • Some programmes have limitations on the number of times they can be recorded. (CPRM) | 41 |
| | • The disc is full or nearly full. Erase un-needed titles or use another disc. | 23, 29, 32 |
| | • You cannot record on finalized DVD-R, DVD-RW (DVD-Video format), +R or DVD-RW (DVD Video Recording format) discs. | — |
| | • Due to peculiarities of DVD-R, DVD-RW (DVD-Video format) or +R, 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-RW (DVD-Video format) and +R recorded on this unit may not be recordable on other Panasonic DVD recorders. | — |
| **Timer recording does not work properly.** **SHOWVIEW programming does not work properly.**[*1] **G-CODE programming does not work properly.**[*2] | • The timer programme is incorrect or different timer programme times overlap. Correct the programme. | 21 |
| | • The unit is not on timer recording standby. ("⏱" on the unit's display is not on.) Press [⏱ TIMER]. | 18–20 |
| | • Set the clock. | 40 |
| **Timer recording does not stop even when [■] is pressed.** | • While using timer recording, press [⏱ TIMER]. ("⏱" disappears.) | 18–20 |
| | • For Continental Europe When using the linked timer recording with external equipment, press "EXT LINK". ("Ext Link" disappears.) | 21 |
| **The timer programme remains even after recording finishes.** | • The timer programme remains if set to daily or weekly. | 20 |
| **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 mains socket 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) ) or use a new disc. We cannot offer any guarantee regarding lost programmes or discs. | — |

[*1] For Continental Europe    [*2] For Australia, N.Z. and Asia

**Play**

| | | |
|---|---|---|
| **Play fails to start even when [▶] (PLAY) is pressed.** **Play starts but then stops immediately.** | • Insert the disc correctly with the label facing up. | 22 |
| | • You tried to play a blank DVD-RAM, DVD-R, DVD-RW (DVD-Video format), +R or DVD-RW (DVD Video Recording format) unplayable on this unit. | 4, 5 |
| | • When recording to DVD-RAM using EP ( 8Hours ) mode, play may not be possible on DVD players that are compatible with DVD-RAM. In this case use EP ( 6Hours ) mode. | 35 |
| **DVD-Video is not played.** | • Some DVD-Video cannot be played when you change the ratings level. | 35 |
| **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. | 22 |
| **No subtitles.** | • Subtitles are not recorded on the disc. | — |
| | • Turn the subtitles on. | 26 |

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**Play** (Continued)                                 **Page**

| | | Page |
|---|---|---|
| **Angle cannot be changed.** | ● Angles can only be changed during scenes where different angles are recorded. | — |
| **You have forgotten your ratings password.** | ● While the disc tray is open, press and hold [● REC] and [▶ (PLAY/x1.3)] on the main unit at the same time for 5 or more seconds. | — |
| **Quick View does not work.** | ● This does not work when audio is other than Dolby Digital.<br>● This does not work when recording is in XP or FR mode. | —<br>— |
| **The resume play function does not work.** | ● This function only works when the indicator appears in the unit display.<br>● Memorized positions are canceled when the unit is turned off or when the tray is opened. The memorized position on the playlist is also canceled when the playlist and title are edited. | —<br>— |
| **The Video CD picture does not display properly.** | ● When connecting to Multi-system TV, select "NTSC" in "TV System" in the SETUP menu.<br>● When connecting to PAL TV, the lower part of the picture cannot be displayed correctly during search. | 39<br>— |
| **Time Slip does not work.** | ● Time Slip does not work when the unit's "TV System" settings are different from the title recorded on the disc. | 39 |

**Edit**

| | | |
|---|---|---|
| **Cannot format.** | ● The disc is dirty. Wipe with a damp cloth and then wipe dry.<br>● You tried formatting a disc that is not compatible with this unit. | 5<br>4, 5 |
| **Cannot create chapters.**<br><br>**Cannot mark the start point or the end point during "Partial Erase" operation.** | ● The unit writes the chapter 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.<br>● These operations are not possible with still pictures.<br>● You cannot set points if they are too close to each other. You cannot set an end point before a start point. | —<br><br>—<br>— |
| **Cannot erase chapters.** | ● When the chapter is too short to erase, use "Combine Chapters" to make the chapter longer. | 29 |
| **The available recording space doesn't increase even after erasing recordings on the disc.** | ● Available recording space on the DVD-R or the +R does not increase even after erasing previously recorded titles.<br>● Available recording space on a DVD-RW (DVD-Video format) increases only when the last recorded title is erased. It does not increase if other titles are erased. | —<br><br>— |
| **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. | — |

**Other**

| | | |
|---|---|---|
| **Output is not digital.** | ● Output is not digital with DVD-Audio. | — |

## Safety precautions

### Placement

Set the unit up on an even surface away from direct sunlight, high temperatures, high humidity, and excessive vibration. These conditions can damage the cabinet and other components, thereby shortening the unit's service life.

Do not place heavy items on the unit.

### Voltage

Do not use high voltage power sources. This can overload the unit and cause a fire.

Do not use a DC power source. Check the source carefully when setting the unit up on a ship or other place where DC is used.

### AC mains lead protection

Ensure the AC mains lead is connected correctly and not damaged. Poor connection and lead damage can cause fire or electric shock. Do not pull, bend, or place heavy items on the lead.

Grasp the plug firmly when unplugging the lead. Pulling the AC mains lead can cause electric shock.

Do not handle the plug with wet hands. This can cause electric shock.

### Foreign matter

Do not let metal objects fall inside the unit. This can cause electric shock or malfunction.

Do not let liquids get into the unit. This can cause electric shock or malfunction. If this occurs, immediately disconnect the unit from the power supply and contact your dealer.

Do not spray insecticides onto or into the unit. They contain flammable gases which can ignite if sprayed into the unit.

### Service

Do not attempt to repair this unit by yourself. If sound is interrupted, indicators fail to light, smoke appears, or any other problem that is not covered in these instructions occurs, disconnect the AC mains lead and contact your dealer or an authorized service center. Electric shock or damage to the unit can occur if the unit is repaired, disassembled or reconstructed by unqualified persons.

Extend operating life by disconnecting the unit from the power source if it is not to be used for a long time.

*Reference*

# Index