

Panasonic®

Operating Instructions

DVD Recorder

Model No. DMR-ES30VEB **DIGA**



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

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Before You Start

Dear customer

Thank you for your trust and your decision to purchase this top-quality device. Panasonic is one of the leading manufacturers of entertainment electronics devices.

We are sure that you will be completely satisfied with this device. This unit has two tuners.

The built-in DVD recorder and VHS recorder can thereby record programmes independently of each other, e.g. simultaneously. With the new Quick Start feature, the unit is ready for use within approx. 1 second. Thus, if a DVD-RAM was previously inserted, recording can begin immediately after the unit is switched on from Standby mode.

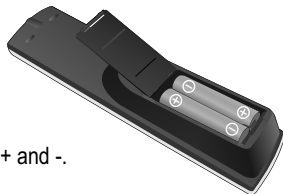
Matsushita Electric Industrial Co., Ltd.

<http://www.panasonic.co.jp/global/>

Inserting Batteries

The batteries last for about a year, depending on how often you use the remote control unit.

- Do not mix old with new batteries, or batteries of different types.
- Only use batteries without any harmful substances (lead, cadmium, mercury).
- Do not use rechargeable type batteries.
- Remove the batteries if the remote control unit will remain unused for longer periods of time.
- Do not heat or short-circuit the batteries.
Immediately remove used-up batteries and replace with batteries of type AA, UM3 or R6.
- Be sure to put in the batteries the right way round + and -.



Dispose of **batteries**, packaging material and the unit according to statutory regulations. They must not be thrown into the household refuse.



Preparation

1. **Read the operating instructions**, the safety precautions, and the information on setting up the unit on pages 4 - 5 thoroughly before you connect, operate or adjust any settings on the unit.

2. **Insert the batteries into the remote control.**

3. **Connect the device to your television.**

Connecting with 21-pin Scart cable

Connecting with RF cable (Aerial cable)

Connecting with Audio/Video cable / S VIDEO cable



4. **The automatic settings start after the unit is switched on.**

The station settings of all receivable television stations are automatically transferred from the teletext data to the DVD Recorder.

With Q-Link function and 21-pin Scart socket:

During [Download from TV], the station settings of all receivable television stations are automatically transferred from your television set to the DVD Recorder.

Connecting with 21-pin Scart cable:

Setup with Q-Link

Setup without Q-Link (Automatic Tuning)



Connecting with RF cable (Aerial cable):

Auto Setup with RF cable (Aerial cable) (Automatic tuning)



Connecting with Audio/Video cable / S VIDEO cable:

Setup without Q-Link (Automatic Tuning)



The station setting for DVD is automatically transferred to VHS.

5. **The basic settings of the unit are complete.**

You can change the basic settings in the SETUP menu.



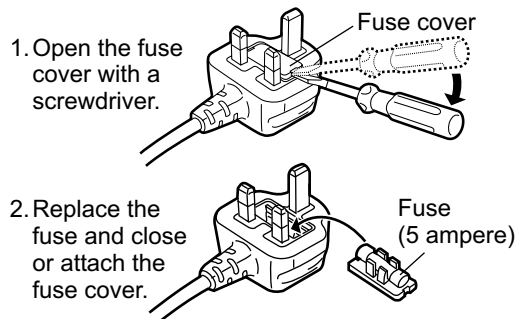


Important Safety Warnings

- The moulded three pin mains plug is supplied for your safety and convenience and must NOT be cut off.

- A 5 amp fuse is fitted in the mains plug. If the fuse has to be replaced, it must be of the same rating and approved by ASTA or BSI to BS1362. Check for the ASTA mark  or the BSI mark  on the body of the fuse.

To replace the fuse, open the fuse compartment with a screwdriver as shown and replace the fuse and the cover securely.



- To prevent electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified service engineer only.

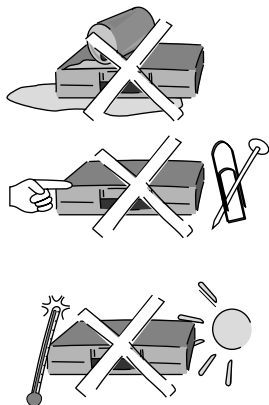
- **WARNING:** To reduce the risk of fire, electric shock or product damage, do not expose this apparatus to rain, moisture, dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

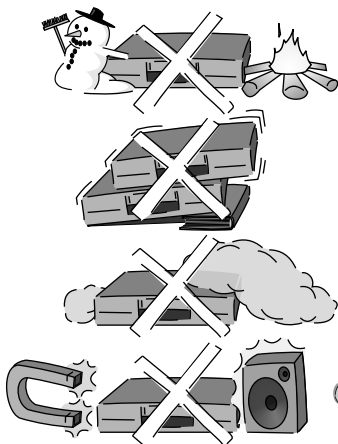
- Do not insert metal object into the slots or openings of the unit.

- This unit is not disconnected from a.c. mains while it remains connected to a live mains outlet, even if it has been turned off.

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

- This unit is intended for use in moderate climates.





CAUTION!

Inside of product

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. UNNGÅ UDSÆTTELSE FOR STRÅLING.	
VARO!	- AVATTAESSA OLET ALLTTÄNÄ NÄKYVÄÄ JA NÄKYMÄTÖN LASERSÄTELYLLÄ. ÄLÄ KATSO SÄTEESEEN.	
VARNING	- SYNLIG OCH USYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. BETRÄKTA EJ STRÅLEN.	
ADVARSEL	- SYNLIG OG USYNLIG LASERSTRÅLING NÄR DEKSEL ÅPNES. UNNGÅ EKSPONERING FOR STRÅLEN.	
VORSICHT	- SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEN STRAHL ANSICHTEN.	
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。ビームを直接目たり、触れたりしないでください。	ROL50233



Caution

- Avoid exposing the unit to direct sunlight or other heat sources.
- Avoid sudden change in temperature or humidity, dew or condensation may form, causing malfunction.
- Dispose of batteries in accordance with the instructions given in this book.
- Place the unit on a flat, stable surface. Do not place heavy object on top of the unit.
- Your attention is drawn to the fact that recording of pre-recorded tapes or discs or other published or broadcast materials may infringe copyright laws.
- This unit is designed for indoor use only.
- Do not use in area with strong magnetic fields, e.g. near transmitting antenna.
- 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.
- 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.
- 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.

**CLASS 1
LASER PRODUCT**

Back of product, see page 14.

Care and Maintenance

- The cabinet can be wiped clean with a damp cloth, disconnect from mains before cleaning. Do not use detergent or solution containing benzol or petroleum.
- Video heads clogging can occur with use, when this happens picture and sound will become distorted during playback. Purchase a head cleaning tape or consult your dealer. Note that video head cleaning is not covered by the warranty.

Included Accessories



Check that you have the accessories and items shown



Included Accessories

☐ AC Mains Lead
RJA0044-3C



☐ Batteries for the Remote Control
R6 size



☐ RF cable
K1TWACC00001



☐ Operating Instructions

☐ Quick Start Guide

☐ Remote control
EUR7720KT0

☐ Audio/Video cable
K2KA6CA00001



☐ Guarantee Card

Panasonic®

Sales and Support Information

Customer Care Centre

- For customers within the UK:
08705 357357
- Visit our website for product information: **www.panasonic.co.uk**
- E-mail:
customer.care@panasonic.co.uk

Direct Sales at Panasonic UK

- Order accessory and consumable items for your product with ease and confidence by telephoning our Customer Care Centre
Mon - Thursday 9:00am - 5:30pm, Friday 9:30am - 5:30 pm (Excluding public holidays).
- Or go on line through our Internet Accessory ordering application at
www.panasonic.co.uk
- Most major credit and debit cards accepted.
- All enquiries, transactions and distribution facilities are provided directly by Panasonic UK Ltd.
- It couldn't be simpler!
- Also available through our internet is direct shopping for a wide range of finished products, take a browse on our website for further details.

Remote control

DVD/VHS



Standby/on switch

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.

Switching this appliance into standby mode does not disconnect it from the mains.

VHS OPERATION SELECT DVD Buttons to switch between DVD and VHS



Press to operate the functions of the DVD element.



Press to operate the functions of the VHS element.

CANCEL/RESET



Cancel button

DVD / VHS Recording functions



DVD Record

41 42

VHS Record

47



DVD TIMER RECORDING menu

45 46

VHS Timer recording menu

49



DVD Menu VIDEO Plus+

44

VHS Menu VIDEO Plus+

48



DVD Switch timer on and off.

44

VHS Switch timer on and off.

48



Record with external recording control

50

TV



Turn the television set on and off.



Select the AV input on the television set.



CH: Select the channel on the television set.

VOLUME: Volume control of the television set.

Number buttons - direct input example:

1 2 3 4 5 6 7 8 9 0
VCD 5: 0 + 5 15: 1 + 5
MP3 JPEG 5: 0 + 0 + 5 15: 0 + 1 + 5

INPUT SELECT



Switch button of the AV input between AV1, AV2, AV3 (front), TP (DVD) and DC (VHS).



Remote control

DVD functions



Basic

SLOW/SEARCH: Search or slow motion playback 32

SKIP: Skip chapters, titles, or pictures. 32

Starts playback. 30
PLAY/ x1.3 RAM 33
You can increase the playback speed. Hold PLAY ► during playback.

STOP Stops recording, replay or forward/reverse action.

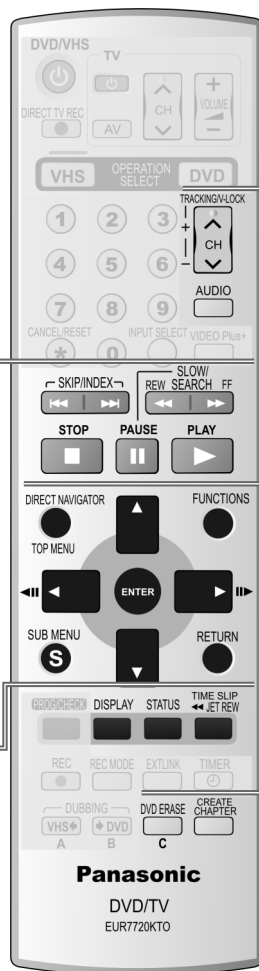
PAUSE Pause a recording or playback.

Convenient

DISPLAY Launch the disc menu. 86 | 87

STATUS Time and detail information appears on the screen. 85

TIME SLIP Select the timeframe to be skipped. 34



A/V channels =



CH: Channel select button.



Depending on the disc, select the audio channel and or the sound track. 33

Navigation =



DIRECT NAVIGATOR TITLE VIEW



Main menu of DVD video. 32



FUNCTIONS selection menu. 54 | 83



Launch sub menus.



Exit a menu.



Direction buttons in the menu navigation.
 Selection of groups ▲▼ or titles.
 ◀▶ Still picture or time loop playback.



Select or save a setting.

Convenient =



Erase a title during playback. 57



Move the selected station.



Split the recording into chapters. 33

Remote control VHS functions

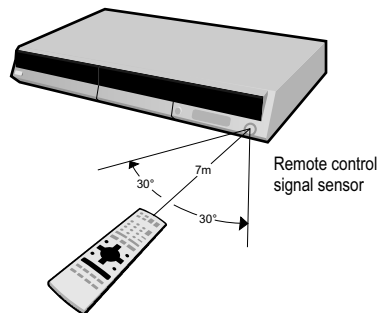


- Basic**
- REW/FF:** Fast forward or rewind from stop mode. Forward or reverse scene search during playback mode.  **39**
- INDEX:** Search for the beginning of a recording.  **40**
- STOP**  **Stops recording, replay or forward/reverse action.** Press and hold more than 3 seconds to remove cassette.
- PAUSE**  **Pause a recording or playback.** Press and hold more than 2 seconds for slow-motion.
- PLAY**  **Starts playback.** **Endless playback** **39**



- A/V cannels =**
- CH:** Channel select button.  **40**
- TRACKING/V.LOCK + / -:** Optimisation of the playback picture.  **84**
- AUDIO**  Press several times to select sound playback mode. **84**
- Navigation =**
- FUNCTIONS**  **VHS FUNCTIONS menu.** **83**
-  **Direction buttons in the menu navigation.**
- ENTER**  **Select or save a setting.**
- RETURN**  **Exit a menu.**
- Convenient =**
- JET REW:** Fast rewind to the beginning of the cassette.  **39**
- STATUS**  **Time and detail information appears on the screen for 5 seconds.** **84**

Remote control



Point the remote control at the unit's sensor. Avoid obstacles in the path of the transmission. The maximum range of the remote control is 7 m directly in front of the unit. Keep the transmission window and the unit sensor clean. The procedure can be impaired by direct sunlight or doors of glass cabinets.

Child lock

You can lock the buttons of the unit and the remote control.

- Press and hold **RETURN** and **ENTER** until **X HOLD** appears in the display.
The unit is now locked.
- In order to unlock the child lock, repeat the procedure until **X HOLD** disappears.

Operating a television set

Change the remote control code to operate your television set.

- Press and hold the **TV** on and off switch button.
- Enter the two-digit code for your television set.
The input must be repeated after batteries are changed.

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

Some television models of the brands listed above, (e.g. older Panasonic units), cannot be operated using the remote control.

Switching to AV input on your Panasonic television set

- Press **AV**. Each press of the button switches between TV reception and AV input.

Remote control



If you use another Panasonic device at the same location, change the mode of the remote control so that you can operate the units independently of each other.

FUNCTIONS

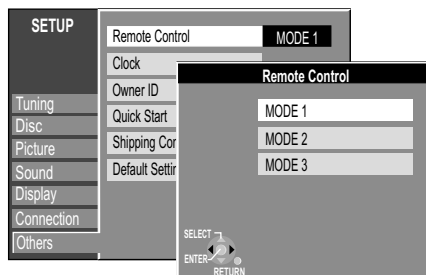
● Setting the remote control

Setting the remote control mode for unit

- Press **FUNCTIONS** in stop mode.
- Use **▲▼** to select [To Others] and confirm with **ENTER**.
- Use **▲▼** to select SETUP and confirm with **ENTER**.
- Use **▲▼** to select [Others], **▶** to select [Remote Control] and confirm with **ENTER**.
- Use **▲▼** to select the desired mode [MODE 1, 2 or 3] and confirm with **ENTER**.

Accept the desired mode on the remote control.

- Press and hold the **ENTER** button for approx. 2 seconds and, at the same time, enter the number that corresponds to the selected mode (1, 2 or 3).
- Press **RETURN** to exit the menu.

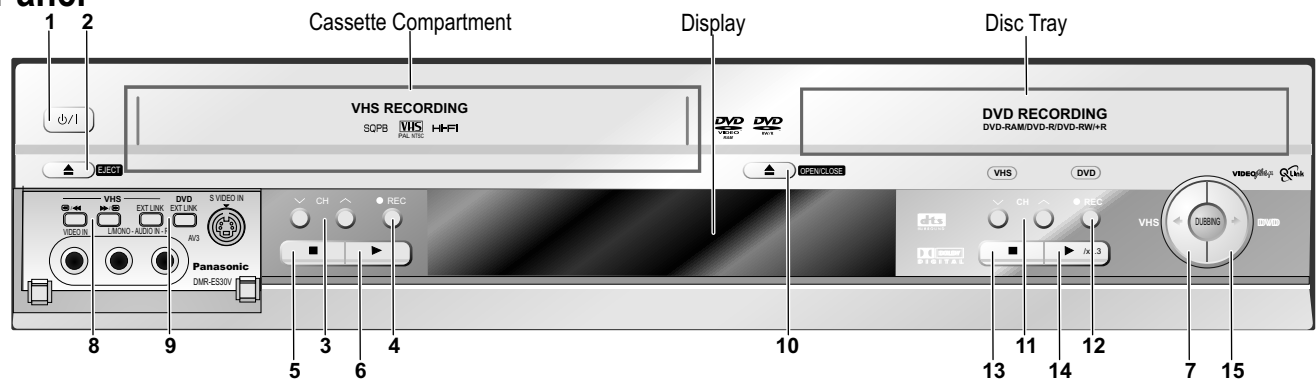


If the mode of the remote control does not correspond with that of the unit, [REMOTE MODE 1 / 2 / 3] will appear on the unit display.

- Press and hold the **ENTER** button for approx. 2 seconds and use the number buttons to enter the number that corresponds to the displayed mode (1, 2 or 3).

If you want to operate two units independently of each other with the same remote control, then change the mode of the remote control.

Front Panel



Front Connections

VIDEO IN L/MONO-AUDIO IN-R

AV3

Input Terminal

S VIDEO IN

S VIDEO Input

1		Standby/on switch 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.			
VHS			DVD		
2	 EJECT	Remove cassette	10	 OPEN/CLOSE	Open and close the disc tray
3	 CH 	Channel selector button	11	 CH 	Channel selector button
4	 REC	Record	12	 REC	Record
5		Stop	13		Stop
6		Playback	14	 / x1.3	Playback / x1.3
7	 DUBBING	Copy from DVD to VHS	15	DUBBING 	Copy from VHS to DVD
Front Access					
8	 VHS	Search or fast forward	9	VHS/DVD EXT LINK	Recording with external recording control

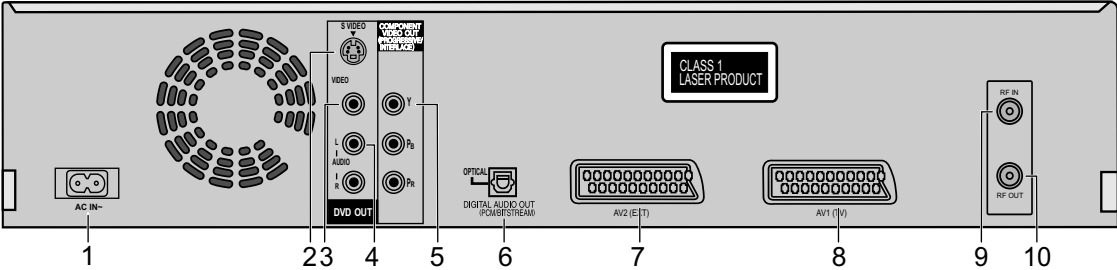
Display



Information displays in VHS mode		Information displays DVD mode	
	VHS operating state, e.g. playback, search		Disc is being read.
	Tape Remain indicator	DVD-RAM VCD +RW	Disc type e.g.: DVD-RAM, DVD-R, DVD-Video, Video-CD.
SP, LP, EP	Tape speed SP : normal recording duration LP : double the recording duration EP : triple the recording duration	XP, SP LP, EP	Record mode All on: FR mode (for flexible recordings or TIMER -controlled recordings)
	Tape display		Disc display
	CH Channel display		TRK Track number GRP Group number TTL Title number PL Number of the playback list CH Channel display
S-VHS	S-VHS Copy display during a copy procedure		

Information displays in VHS and DVD mode			
PB	Playback		TIMER -controlled recording. Blinking : There are less than 10 minutes until the start of a programmed TIMER recording. The device is not set to TIMER standby mode.
REC	Record		
	Current time, recording/playback counter, various messages		
	Copy direction display from DVD to VHS or from VHS to DVD	EXTL	External-Link display On : A TIMER -controlled recording is being performed by an external device.

Sockets



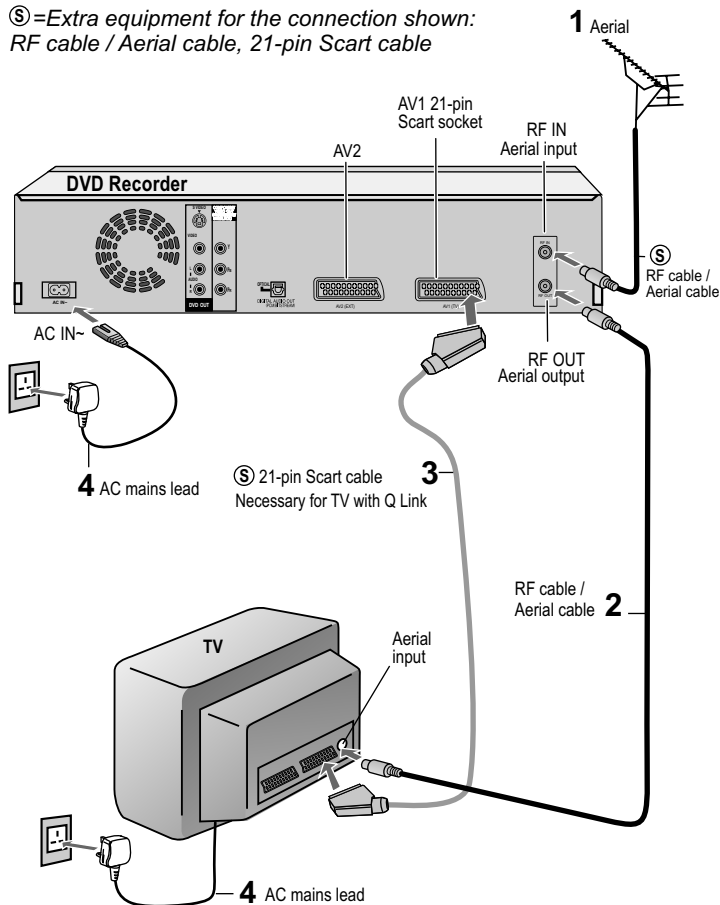
1	AC IN~ = Power supply
---	-----------------------

DVD OUT	
2	S VIDEO = S VIDEO out connector
3	VIDEO = Video output
4	R-AUDIO-L = Audio output right/left channel
5	COMPONENT VIDEO OUT Y = Luminance signal (luminance) Pb = Chrominance signal (colour difference) Pr = Chrominance signal (colour difference)
6	OPTICAL = Digital audio output

VHS/DVD COMMON	
7	AV2 (DECODER/EXT) 21-pin Scart socket = connection of an external unit
8	AV1 (TV) 21-pin Scart socket = TV connection
9	RF IN = Antenna input
10	RF OUT = Antenna output

Connecting with 21-pin Scart cable

Ⓢ=Extra equipment for the connection shown:
RF cable / Aerial cable, 21-pin Scart cable



Follow the steps below.

Disconnect the power of all units.

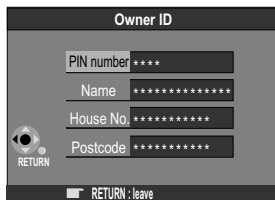
- 1** Connect the Aerial to the RF IN (Aerial input) of the DVD Recorder.
- 2** Connect the RF OUT (Aerial output) of the DVD Recorder to the Aerial input of the television set.
- 3** Connect the AV1 socket (21-pin Scart socket) of the DVD Recorder to the Scart input of the television set.
- 4** Plug the DVD Recorder and the television set into the AC mains socket.

If your television set supports Q-Link, follow the steps for Auto-Setup with Q-Link on page 16. If your television set does not support Q-Link, follow the steps for Auto-Setup without Q-Link on page 17.

If your television supports Q-Link or RGB, connect it to the DVD Recorder with a fully wired 21-pin Scart cable.

SETUP - Connections - [AV1 Output]

Setup with Q-Link



Download from TV using Q-Link (Registered trademark of Panasonic)

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

Note that you must first perform a station search. If you have a Panasonic television, [Download from TV] will be displayed automatically at the beginning of the station transfer.

- Switch your television on and select the AV channel.
- Switch the device on using the **Stand-by/on switch**.

The unit starts the station transfer. The station transfer is complete when the menu Owner ID appears.

Owner ID

You can complete the Owner ID now or skip this step and do it later. To do it later, press the **RETURN** button. Your DVD Recorder is now ready to use.

- To set the Owner ID now, use ► and press the **Numeric** buttons or ▲▼► to enter a four-digit PIN number. Press ◀ to correct the digit.
- Make sure that you will remember the PIN number (make a note of it).
- Press the **ENTER** button twice to confirm.
- Enter the [Name], [House No] and [Postcode] in the same way, using ▲▼◀►.
- Press the **ENTER** button to confirm each entry.
- Press the **RETURN** button to leave the Owner ID screen.
- You will now see the TV picture. Your DVD Recorder is now ready to use.

If the clock setting menu appears

(Auto clock set was not possible due to a weak signal)

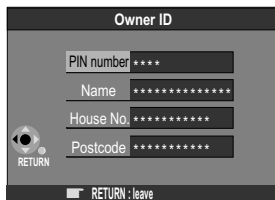
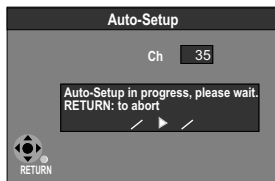
- Press ▲▼◀► to set the correct time and date and press **ENTER** to finish this setting.

Mind that a wrong date or time will influence the programmed recording of TV programmes (don't forget to change summer time and winter time).

If Auto-Setup has previously been completed the DVD Recorder will not start Auto-Setup automatically. In this case you can re-start Auto-Setup again. See page 72.

*If you want to cancel Auto-Setup before it has finished, press the **RETURN** button. You can restart Auto-Setup again. See page 72.*

Setup without Q-Link (Automatic Tuning)



Auto-Setup

The automatic setup saves all available TV stations. If the station also broadcasts date and time, then the clock is also set automatically.

- Switch on your television and select the AV channel.
- With the **Stand-by/on switch** turn on the DVD Recorder. Automatic tuning for all available TV stations begins. Approximate duration is 5 minutes.
- After Automatic tuning has finished, press **RETURN**. The Owner ID screen will appear.

Owner ID

You can complete the Owner ID now or skip this step and do it later. To do it later, press the **RETURN** button. Your DVD Recorder is now ready to use.

- To set the Owner ID now, use **▶** and press the **Numeric** buttons or **▲▼▶** to enter a four-digit PIN number. Press **◀** to correct the digit.
- Make sure that you will remember the PIN number (make a note of it).
- Press the **ENTER** button twice to confirm.
- Enter the [Name], [House No] and [Postcode] in the same way, using **▲▼◀▶**.
- Press the **ENTER** button to confirm each entry.
- Press the **RETURN** button to leave the Owner ID screen.
- You will now see the TV picture. Your DVD Recorder is now ready to use.

If the clock setting menu appears

(Auto clock set was not possible due to a weak signal)

- Press **▲▼◀▶** to set the correct time and date and press **ENTER** to finish this setting.

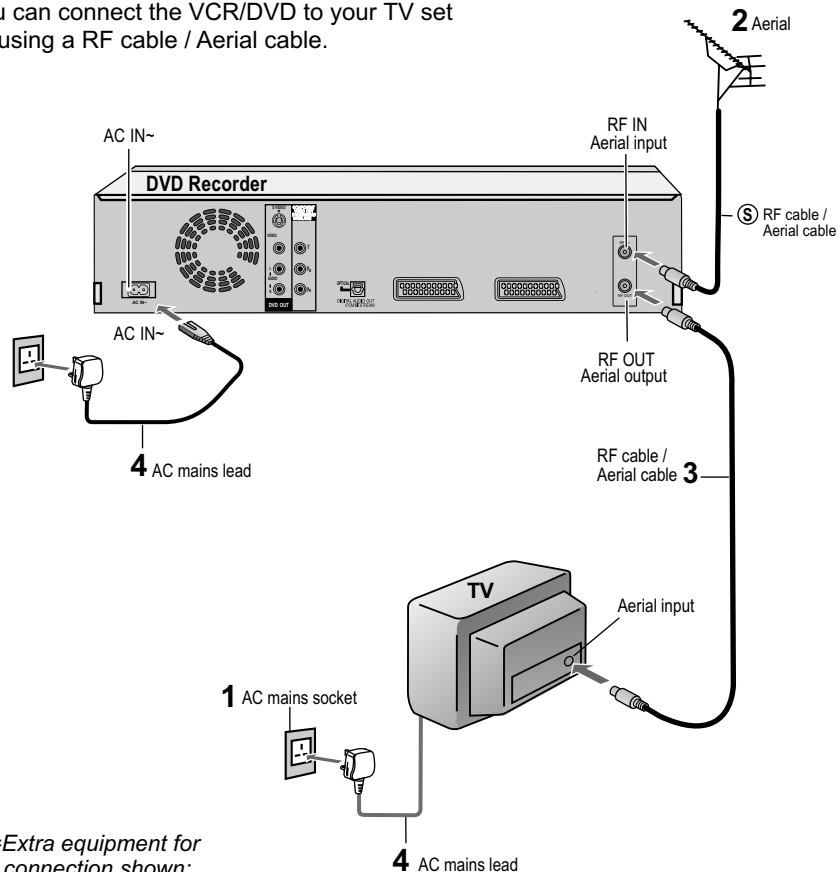
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If Auto-Setup has previously been completed the DVD Recorder will not start Auto-Setup automatically. In this case you can re-start Auto-Setup again. See page 72.

*If you want to cancel Auto-Setup before it has finished, press the **RETURN** button. You can restart Auto-Setup again. See page 72.*

Connecting with RF cable (Aerial cable)

You can connect the VCR/DVD to your TV set by using a RF cable / Aerial cable.



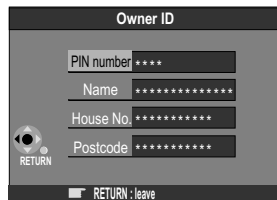
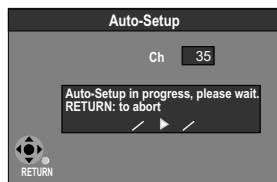
Ⓢ=Extra equipment for the connection shown:
RF cable / Aerial cable

Follow the steps described below.

- 1 Ensure TV Power is disconnected from AC mains socket.
- 2 Connect aerial to the RF IN (Aerial input) connector of the DVD Recorder.
- 3 Connect the DVD Recorder's RF OUT (Aerial output) to the TV set's Aerial in connector.
- 4 Connect DVD Recorder and TV set to the AC mains socket.

Follow the steps for Auto-Setup on page 19.

DVD Display



Auto-Setup with RF cable (Aerial cable) (Automatic tuning)

- Turn on your television set.
- With the **Stand-by/on switch** turn on the DVD Recorder. Automatic tuning for all available TV stations begins. Approximate duration is 5 minutes.
- After Automatic tuning has finished, press **RETURN**. The Owner ID screen will appear.
- While Auto-Setup is running the first digit of the DVD Recorder display will flash. After a while it will stop flashing and the RF output channel number will be displayed.
- Select an unused channel pre-set on your TV and tune it to the RF output channel number shown on the DVD Recorder display (or until you can clearly see the Auto Setup screen). Store the new video playback channel (refer to the instructions for your TV).

In some cases, the RF output channel may interfere with the TV stations transmitted in your area. This may prevent you from seeing the On-Screen Display clearly. Please see page 20 for removing the interference before restarting Auto-Setup (page 72).

Owner ID

You can complete the Owner ID now or skip this step and do it later. To do it later, press the **RETURN** button. Your DVD Recorder is now ready to use.

- To set the Owner ID now, use **▶** and press the **Numeric** buttons or **▲▼▶** to enter a four-digit PIN number. Press **◀** to correct the digit.
- Make sure that you will remember the PIN number (make a note of it).
- Press the **ENTER** button twice to confirm.
- Enter the [Name], [House No] and [Postcode] in the same way, using **▲▼◀▶**.
- Press the **ENTER** button to confirm each entry.
- Press the **RETURN** button to leave the Owner ID screen.
- You will now see the TV picture. Your DVD Recorder is now ready to use.

If the clock setting menu appears

(Auto clock set was not possible due to a weak signal)

- Press **▲▼◀▶** to set the correct time and date and press **ENTER** to finish this setting.

Mind that a wrong date or time will influence the programmed recording of TV programmes (don't forget to change summer time and winter time).

Removing Interference / Changing RF output channel



TV screen
The picture with interference



On-Screen Display
Test pattern indication

DVD display



Indication when the RF output channel is 21 (example)



Indication after changing the RF output channel to 31 (example)



Test pattern indication



The clear picture

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



- Press the **FUNCTIONS** button for more than 5 seconds. The RF output channel number is displayed on the DVD display.



- Press the **Numeric** buttons or use the Channel (**CH**) button to select a channel number, which differs by 2 or 3 from the present channel number. (For example, if the original channel number was 28, enter 31.)



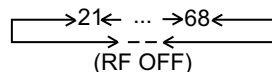
- Retune your TV until you receive the Test pattern. It may be necessary to repeat steps above until you can see the Test pattern clearly. If using a Scart cable please see the note below.



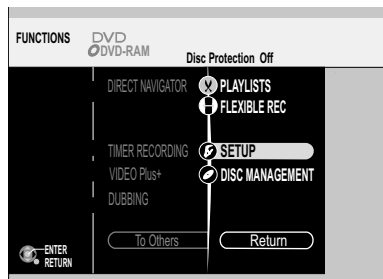
- Press **ENTER** to finish this setting.

Set the RF output channel of the DVD Recorder to [- -] (RF OFF) if the DVD Recorder is connected to the TV via the 21-pin Scart cable.

- Press **FUNCTIONS** for about 5 seconds. The preset channel will be displayed on the DVD display.
- Press channel select buttons **CH** or **0** to invoke [- -].
- Confirm with **ENTER**.



Checking the Settings after Auto-Setup



FUNCTIONS



- Press **FUNCTIONS** to display the FUNCTIONS Menu.
- Press **▼▲** to select [To Others] and then press **ENTER**.
- Press **▼▲** to select SETUP and then press **ENTER**.
- Press **▶** to select Manual and then press **ENTER** to display the list of tuned TV stations and confirm that all available TV stations have been set correctly.

If station name is [****]:

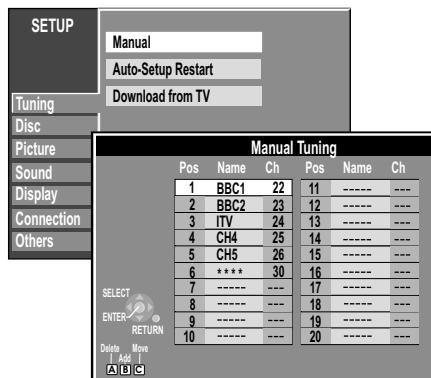
The asterisks indicate that a station was found during Auto-Setup but has not been named (due to weak signal).

The stations in the list with asterisk will need to be named manually see page 71.

If station name is [- - - -]:

The dashes represent unused channel positions.

The stations in the list with dashes will need to be set manually. See page 71.



RETURN



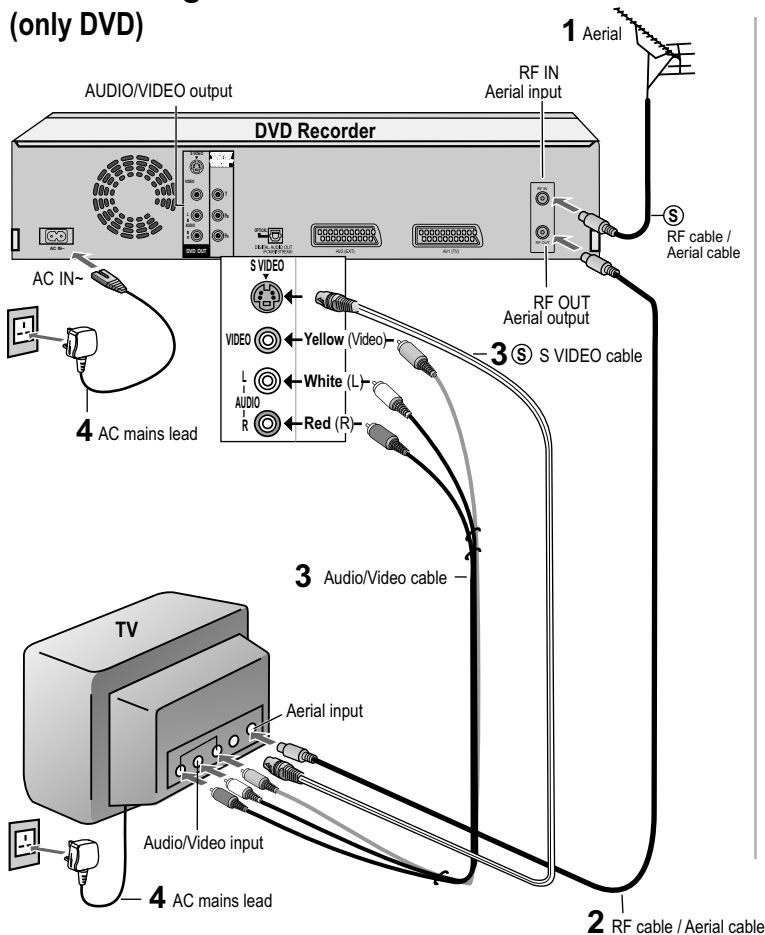
- Press **RETURN** to exit the On Screen Display.

When the station names and/or channel numbers have not been set correctly, see page 71 for details.

When no station has been found, confirm all connections of the DVD Recorder again and restart the Auto-Setup. See page 70 for details.

TV Reception Channels

Connecting with Audio/Video cable / S Video cable (only DVD)



Follow the steps below.

Disconnect the power of all units.

1 Connect the aerial to the RF IN (Aerial input) of the DVD Recorder.

2 Connect the RF OUT (Aerial output) of the DVD Recorder to the Aerial input of the television set.

3 Connect the DVD OUT (AUDIO L/R) of the DVD Recorder to the input of the television set. Connect the DVD OUT (VIDEO oder S VIDEO) of the DVD Recorder to the input of the television set.

4 Plug the DVD Recorder and the television set into the AC mains socket.

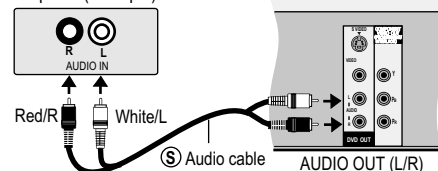
Follow the steps for Auto-Setup without Q-Link on page 17.

Ⓢ = Extra equipment for the connection shown:
S VIDEO cable, RF cable / Aerial cable

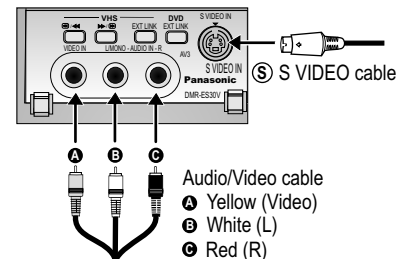
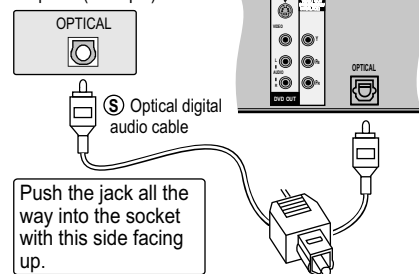
External devices

Ⓢ = Extra equipment for the connections shown

Amplifier (example)



Amplifier (example)



Connecting an analogue amplifier or an analogue system component

In order to enjoy stereo or Dolby Pro Logic, connect the appropriate amplifier or an analogue audio component.

- Connect the analogue output (L/R) e.g. to a Dolby Pro Logic amplifier.
- As described, connect the Audio cable according to the colours and markings of the connection sockets (white/L, red/R).

Connecting a digital amplifier or a digital system component

- Connect an amplifier with a Dolby Digital-, DTS- oder MPEG decoder.
- Use an optical digital audio cable.
- In the Sound SETUP menu, change the [Digital Audio Output] setting according to your connected digital amplifier.

75

You cannot use DTS Digital Surround decoders that are not suitable for DVD.

DOLBY This device can playback stereo DIGITAL sound in Dolby Digital (2 channels). Connect an amplifier with built-in Dolby Digital decoder in order to be able to enjoy Surround Sound.



Connect this unit to a device with a DTS decoder in order to be able to play DVDs with this symbol.

Connecting to the AV3 input sockets (e.g. Camcorder)

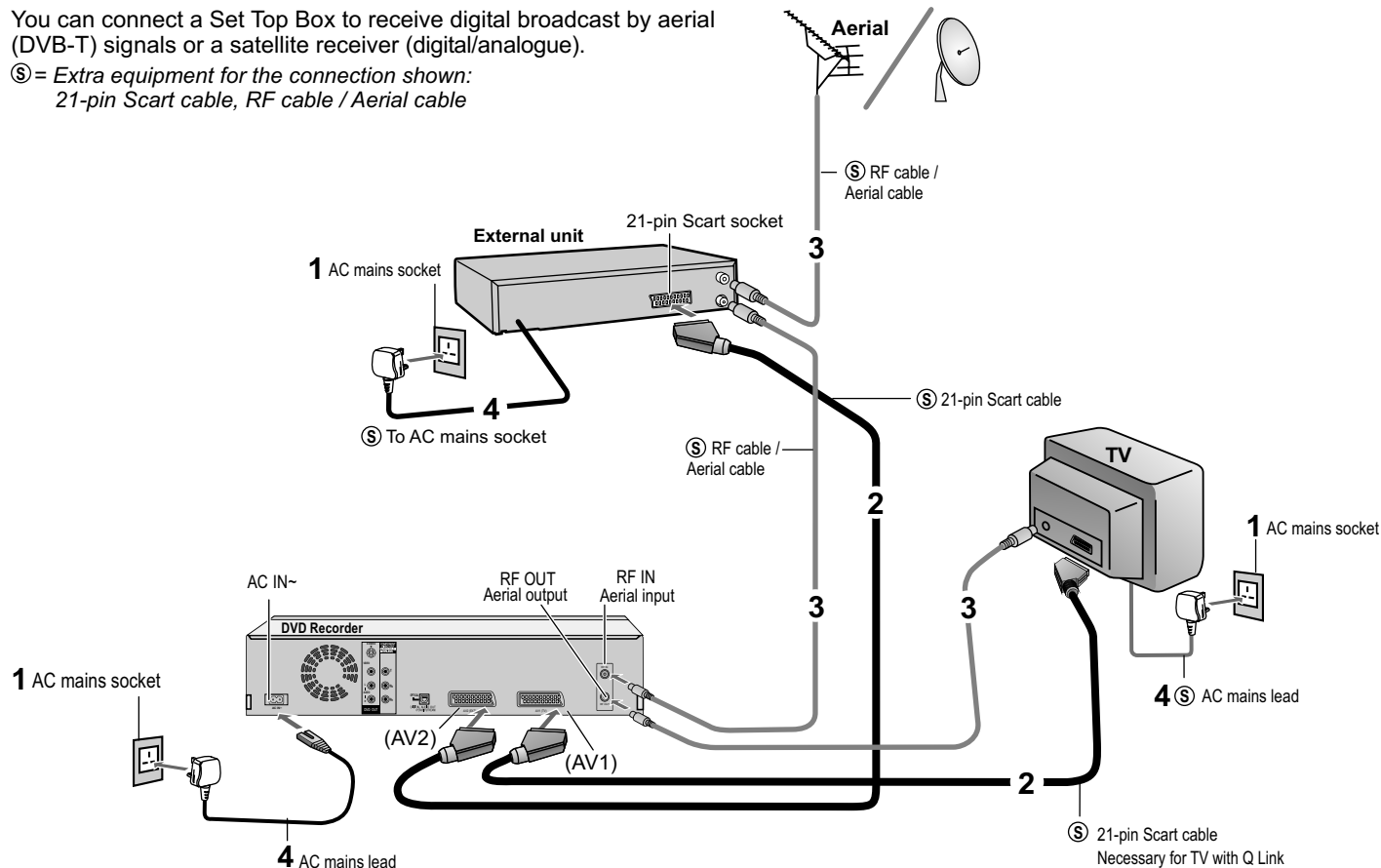
Before you connect the cable, make sure that the power to both devices is turned off. After you have connected the cables, switch both devices on. If the audio output of the other device is mono, connect it to the L/MONO socket. Both the left and the right channels will be recorded if the connection is made via the L/MONO socket.

Connecting to Satellite Receiver, Set Top Box

You can connect a Set Top Box to receive digital broadcast by aerial (DVB-T) signals or a satellite receiver (digital/analogue).

Ⓢ = Extra equipment for the connection shown:

21-pin Scart cable, RF cable / Aerial cable

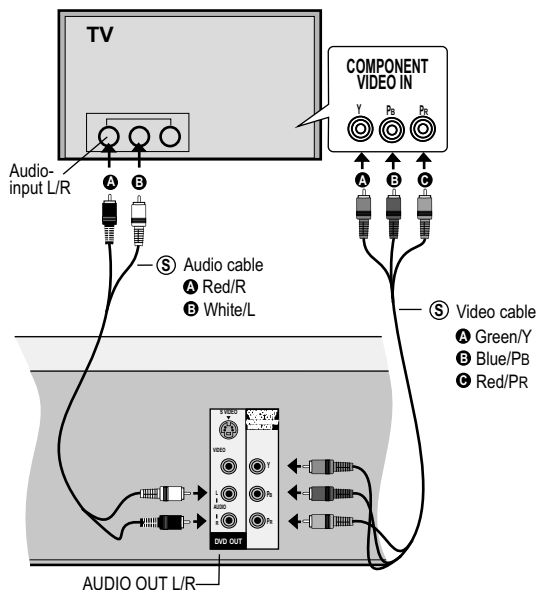


Follow the steps described below.

- 1** Ensure TV Power, External unit Power and DVD Recorder Power are disconnected from AC mains socket.
- 2** Connect a 21-pin Scart cable (fully wired) to the AV2 21-pin Scart socket on the DVD Recorder and to the 21-pin scart socket on the External unit.
Connect a 21-pin Scart cable (fully wired) to the AV1 21-pin Scart socket on the DVD Recorder and to the 21-pin Scart socket on the TV set.
- 3** Connect aerial to the Aerial in connector of the External unit.
Connect the External unit's Aerial out connector to the DVD Recorder's RF IN (Aerial input).
Connect the DVD Recorder's RF OUT (Aerial output) to the TV set's Aerial in connector.
- 4** Connect the External unit, DVD Recorder and TV set to the AC mains supply.
- 5** Switch on the TV set and DVD Recorder.
Set the SETUP settings for AV2 according to the connected External unit (See page 77).
- 6** Switch on the External unit. Then follow page 17 for Auto-Setup with 21-pin Scart cable.

COMPONENT VIDEO OUT

Ⓢ = Extra equipment for the connections shown



If the AV1 Output setting in the SETUP menu is set to [RGB (without component)], no output will take place to the COMPONENT VIDEO OUT sockets. Set this option to [Video (with component)].

If the unit is connected to the television via the VIDEO OUT, the S VIDEO OUT or the AV1 socket, output takes place in the interlace format regardless of the settings.

COMPONENT VIDEO OUT socket

These sockets can be used for interlace or progressive output and deliver a clearer picture than the S VIDEO OUT socket. Connections via these sockets output colour difference signals (Pb/Pb) and brightness signals (Y) separately. Colours can be reproduced true to colour. The properties of the COMPONENT VIDEO input socket are dependent on the television set or screen.

Always connect sockets of the same colour. Connect the Audio cables to the corresponding audio input sockets of the television.

Connecting a television with COMPONENT VIDEO input sockets

If your television with LCD or plasma screen supports the progressive procedure, connect it to the COMPONENT VIDEO OUT sockets. If you want to enjoy progressive-quality video, set Progressive to [On].

- Press **FUNCTIONS** in stop mode.
- Use **▼▲** to select [To Others] and confirm with **ENTER**.
- Use **▼▲** to select SETUP and confirm with **ENTER**.
- Use **▼▲** to select [Connection], **▶**, **▼▲** to select [Progressive] and confirm with **ENTER**.
- Use **▼▲** to select the [On] option and confirm with **ENTER**.

Progressive television picture

The progressive aspect ratio (height to width) is set to 16:9. DVD-Video with an aspect ratio of 16:9 will be displayed properly. However, video material with an aspect ratio of 4:3 will be displayed stretched to the right and left.

Displaying the picture in the correct aspect ratio

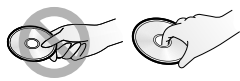
If it is possible to adjust the aspect ratio of your television for progressive images, set the Progressive setting to [On].

In normal televisions, progressive output can lead to flickering, even if the television is progressive-compatible. Make sure that the Progressive setting is set to [Off].

Handling discs



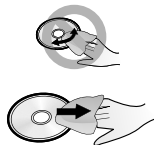
Only play round discs.



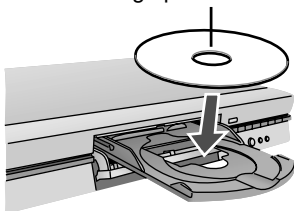
Do not touch the recording surface of the disc.

Cleaning DVD-Videos, Video CDs and CDs

If the disc is dirty, wipe it with a moist and then a dry cloth.

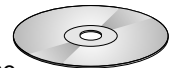


Place the disc in the tray with the label facing upwards. With double-sided discs, place the side that you want to play, with the label facing up.



Handling discs

If the surface of a disc that does not have or was removed from a cartridge is damaged, scratches, dirt, dust or fingerprints can compromise the recording, editing or playback. Such damage can also occur when the disc is inserted back into the cartridge.



Cleaning the DVD-RAM

Clean the disc with a special DVD-RAM cleaner (optional) and read the cleaner instructions thoroughly before use.

Bad scratches and stubborn dirt may not be able to be removed so that recording, editing or playback is still compromised even after cleaning. The disc should then no longer be used.

Do not use benzine, alcohol, water, cleaning sprays, household cleaners or other solvents.

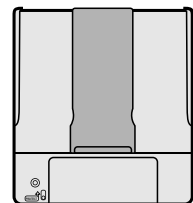
Note: Only the label side of the disc may be written on. Use a soft oil-based felt pen. Do not use a ball-point pen or other hard writing instrument.

Do not affix any stickers or labels to the disc. The disc can warp and may become unusable.

When not in use, place the disc in its jewel case or cartridge so that it does not become scratched or dirty.

Do not drop the disc, place them on top of each other and never bang them. Do not place anything on top of the disc.

Protect the disc from dirt, dust, heat, humidity, direct sunlight or strong temperature fluctuations (since condensation water can form).



Cartridge

Regional codes (DVD-Video only)

DVD-Videos with the regional code 2 or ALL can be played with this unit. The code is listed on the backside of the unit.
England and Continental Europe: 2.



Disc formats



Before playback

Due to the disc programme structure set by the manufacturer, not all described functions may be able to be used. Depending on the disc type, the regional code and the recording conditions, it may not always be possible to play the discs listed.

Playback and recording discs				
	DVD-RAM	4.7GB / 9.4GB, 12cm 2.8GB, 8cm rewritable		TIME SLIP function, CPRM compatible, supports 2 channel sound, 16:9 format, creation of playback lists, deleting individual titles frees up storage space
	DVD-R (DVD-Video format)	4.7GB, 12cm 1.4GB, 8cm writable	unfinalised  finalised 	
— —	+R	4.7GB, 12cm writable	unfinalised  finalised 	
	DVD-RW (DVD-Video format)	12cm / 8cm rewritable	unfinalised  finalised 	
Playback discs				
	DVD-Video	12cm / 8cm playback only		High-quality video and music discs.
	DVD-Audio	12cm / 8cm playback only		Music discs in digital quality. Playback in 2-channel sound.
	DVD-RW (DVD-VR format)	12cm / 8cm playback only		Unfinalised CPRM compatible discs with "one time only recorded" recording. Recorded on another DVD recorder.
— —	+RW	12cm / 8cm playback only		Recorded on another DVD recorder. The disc must be finalised eventually.
	Audio CD CD-R/RW	12cm / 8cm playback only		Music and audio recordings.
— —		12cm / 8cm playback only		Music in MP3 format, pictures in JPEG and TIFF format. Max. 999 titles / 99 groups.
	Video CD CD-R/RW	12cm / 8cm playback only		Music and video recordings.

Disc formats

RAM Cartridge discs

When the write-protection device is activated, you can neither record nor edit or delete the contents of a disc.



Cartridge write protection

Remove the 8 cm discs from the cartridge before you use the unit.

Discs recorded with PAL or NTSC signals:

TV type	Disc	Yes/No
Multi-system TV	PAL	Yes
	NTSC	Yes
NTSC-TV	PAL	No
	NTSC	Yes
PAL-TV	PAL	Yes
	NTSC	Yes (PAL60)

Discs that cannot be played back: Some DVD-R; DVD-R DL/DVD+R DL; DVD-RAM (2.6 GB/5.2 GB); DVD-ROM; CD-ROM; CDV; SVCD; SACD; MV-Disc; PD; Photo CD; Divx Video Disc; Blu Ray, etc. The playback of non-standard video CDs is not guaranteed.



DVD-Video Recording Format (VR)

This format enables the free editing of recordings. Digital programmes that allow "one time only recording" can be recorded once on a CPRM-compatible DVD-RAM. Playback is only possible on compatible units.

DVD-Video Format (V)

This format corresponds with the commercially available DVD-Video. Recordings made with this unit must be finalised in order to be played back on a DVD player. Digital programmes that allow "one time only recording" can not be recorded. The DVD-Video Format can be recorded on DVD-R or DVD-RW.

RAM CPRM (Content Protection for Recordable Media)

This unit is compatible with the copy-protection system CPRM for writeable media. When using a CPRM-compatible disc, a digital programme can be recorded one time. Programmes broadcast with this copy-protection system cannot be recorded on DVD-R or 2.8 GB DVD-RAM.

RAM The disc can only be played back on DVD-RAM-compatible players.

RAM You can use the playback and the DIRECT NAVIGATOR while the unit is in timer-standby mode.

-R -RW/+R After the recording is complete, it takes approx. 30 seconds for the unit to finish the recording information. The first 30 seconds of a recording may be missing if you perform several **TIMER**-controlled recordings in a row.

In order to playback a DVD-R, DVD-RW (DVD-Video format) or +R recorded using this unit on another unit, the disc may need to be finalised.

The disc may also not be able to be played back on other units even after finalising.

New or previously used (e.g. in computers) DVD-RAMs or DVD-RWs may need to be formatted before recording with this unit.

This unit cannot play discs that contain PAL and NTSC signals.

Playback



Playback functions



- 30 Playback, PAUSE during playback,
Cancelling playback,
Resuming playback
- 31 A menu appears on the television screen,
Direct playback
- 32 Selecting programmes/titles for playback,
Slow-motion playback, Fast forward/rewind,
Skipping chapters, titles or pictures,
Single-frame playback
- 33 Quick View,
Splitting a recording into chapters,
Changing the audio channel
- 34 TIME SLIP, Delayed playback
- 35 JPEG playback
- 36 JPEG playback
- 37 MP3 playback



- 38 Before playback
- 39 Playback, Ending playback,
PAUSE during playback,
Slow-motion playback, Still picture playback,
Image search forward or backwards,
JET REW, Endless playback
- 40 VHS index search system (VISS),
VHS playback with high picture quality,
S-VHS Quasi Playback,
Setting the track position manually

Switch the unit on.



Playback

- Press **OPEN/CLOSE** to open the disc tray.
- Place the disc in the disc tray.
- Press **PLAY** .

The disc tray is closed and playback begins.

The reading of the disc may take some time!

RAM **•R** **•RWM** **•R** **•RWMR** Playback begins with the last recorded title.

DVD-A **DVD-V** **VCD** **CD** Playback begins at the beginning of the disc.

PAUSE



PAUSE during playback

- Press **PAUSE** during the playback.
- Press **PAUSE** again to resume playback.

STOP



Cancelling playback

- Press **STOP** during the playback.
- Press **STOP** again to watch TV via the unit's tuner.

Resuming playback

- Press **STOP** during the playback.
The unit saves the position.
The position is deleted if you switch the unit off.
- Press **PLAY** to resume playback from the saved position.

- To cancel the function, press **STOP** several times.



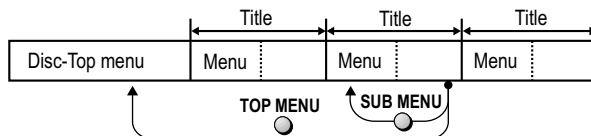
A menu appears on the television screen

- **VCD** Use the number buttons to select an entry.
e.g.: number 5: 0 + 5 or number 15: 1 + 5
- **DVD-A DVD-V** Use **▼▲▶◀** or the number buttons to select an entry and confirm with **ENTER**.

If **⓪** appears on the television screen, this function is not possible at the moment.

The operation of the disc menu depends on the inserted disc. If you launch the main menu with **TOP MENU**, another menu may appear than when you press **SUB MENU**.

- Use the number buttons or **◀▶▼▲** to select the desired entry and confirm with **ENTER**.



Direct playback

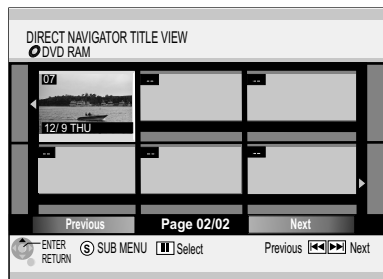
Starting the playback from a selected Title, Chapter or Track.

- During playback, use the number buttons to select the desired entry.

5: 0 + 5 15: 1 + 5 **[MP3] [JPEG]** 5: 0 + 0 + 5 15: 0 + 1 + 5

DVD-A While the screensaver is displayed, you can enter a group number.
This function is not available for some discs if playback is stopped.

Playback



Symbols in DIRECT NAVIGATOR

- 🔒 The programme is write-protected.
- 🔒 The programme is copy-protected.
- ⊗ The programme cannot be played back due to damaged data.
- Recording is in progress.

N (NTSC)/ **P** (PAL):

The programme was recorded in an image format that does not correspond with the TV system selected in the unit.

DIRECT NAVIGATOR

Selecting programmes/titles for playback RAM R RWV R RWVR

You can display the menu during playback, recording and in stop mode using the **DIRECT NAVIGATOR** button.

- Press **DIRECT NAVIGATOR**.
- Use **▼▲▶** to select the desired title and confirm with **ENTER**.
- Press **RETURN** to exit the menu.

You can select other pages using **SKIPI◀◀** Previous or **▶▶I** Next.



Slow-motion playback

Not CD

- Press **SLOW/SEARCH ◀◀**, **▶▶** in pause mode.
Speed can be controlled in 5 stages.
- Press **PLAY ▶** to resume normal playback.

RAM R RWV R The pause feature is automatically switched on after approx. 5 minutes.

VCD Only for forwards direction. DVD-A Only motion pictures

Fast forward/rewind

- Press **SLOW/SEARCH ◀◀**, **▶▶** during playback.
As long as the button is pressed, the search speed increases in 5 stages.
- Press **PLAY ▶** to resume playback.

Sound is only output at the first fast-forward speed.



Skipping chapters, titles or pictures

- Press **SKIPI◀◀**, **▶▶I** during playback or pause to skip chapters, titles or pictures.

Single-frame playback

Not CD

- Press **◀II**, **II▶** in pause mode.
Each press of the button shows the next or the previous frame.
- Press **PLAY ▶** to resume playback.

VCD Only for forwards direction. DVD-A Only motion pictures

Playback



Quick View (Play/ x1.3) RAM

Increase playback speed without negative effects on sound.

- Press and hold **PLAY** ► during playback.
- Press **PLAY** ► again to return to normal playback speed.

Output takes place in PCM with a digital connection.

*Quick View is cancelled if **SKIP** ◀◀, ▶▶ or **PAUSE** ■■ is pressed or playback of a programme begins that was not recorded with Dolby Digital.*

Quick View does not function during simultaneous recording and playback in XP or FR mode .

CREATE
CHAPTER



Splitting a recording into chapters RAM

- Press **CREATE CHAPTER** during playback.

*Press **SKIP** ◀◀ or **SKIP** ▶▶ to skip the chapter.*

AUDIO



Changing the audio channel

- Press **AUDIO**. RAM RWVR VCD LR → L → R



Language setting

DVD-A DVD-V You can change the number of the audio channel, e.g. the language setting, by pressing the appropriate button.

If you cannot change the sound track, select the [PCM] setting in the SETUP menu for Dolby Digital.

Playback



TIME SLIP **RAM** **-R** **-RW(V)** **+R** **-RW(V)**

- Press **TIME SLIP**.
- Use **▲▼** to select the time that the playback should jump forward or back. If you press and hold the buttons, the time span increases or decreases minute-by-minute.
- Press **ENTER** to confirm the selected time.
- Press **PLAY ▶** to hide the picture in picture.



The TV picture is shown as picture-in-picture.

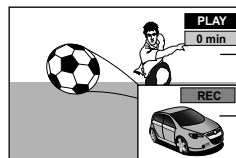
Playback picture

Currently received picture (receive channel).

The receive channel can be switched using the **CH ▲, ▼** button. This is not possible during a recording.

Delayed playback **RAM**

Playback can be started while the unit is still recording. Without stopping the current recording, you can view the recording from the beginning.

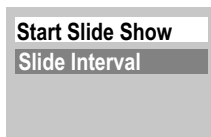
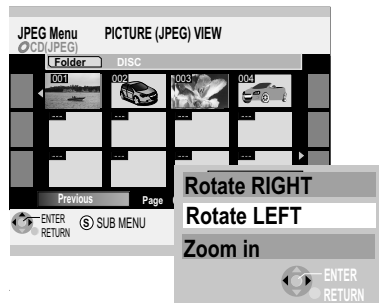


Playback started 30 seconds ago.

Image currently being recorded.

- Press **STOP ■** to end the playback.
- After 2 seconds, press **STOP ■** again to stop the recording.
Use **⌚ TIMER** to stop a **TIMER**-controlled recording.

JPEG playback



CD (JPEG)

- Press **DIRECT NAVIGATOR**. The PICTURE (JPEG) VIEW appears on the screen.
- Use **▼▲◀▶** to select the desired picture and start picture playback using **ENTER**.
- Use **STOP ■** or **DIRECT NAVIGATOR** to return to PICTURE (JPEG) VIEW.

To select a picture using the number buttons, press e.g. for picture no. 5: **0 0 5 0**.

Rotating pictures

- Press **SUB MENU** during playback.
- In the sub menu, use **▲▼** to select the desired setting and confirm with **ENTER**.
- Use **STOP ■** or **DIRECT NAVIGATOR** to return to PICTURE (JPEG) VIEW.

Zoom in / Zoom out (Only for pictures smaller than 640 x 480 pixels)

- Press **SUB MENU** during playback.
- In the sub menu, use **▲▼** to select [Zoom in] and confirm with **ENTER**.
- To switch back to the original size, confirm [Zoom out] with **ENTER** in the sub-menu.

Selecting a Folder

- In PICTURE (JPEG) VIEW, use **▲▼** to select [Folder].
- If you confirm [Folder] with **ENTER**, you can use **▲▼** in the following menu to select the desired Folder and confirm with **ENTER**.

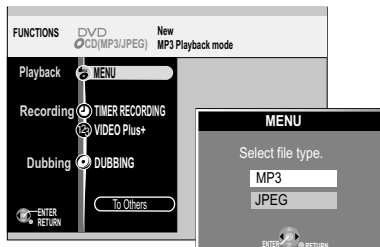
Slide Interval

- Press **SUB MENU**.
- Use **▲▼** to select [Slide Interval] and confirm with **ENTER**.
- Use **◀▶** to select the display duration of the individual pictures in the Slide Show.
- Confirm with **ENTER**.

Start Slide Show

- Press **SUB MENU** again and confirm [Start Slide Show] with **ENTER**.
The pictures in the folder are displayed in the selected interval. The Slide Show stops after the last picture. Use **STOP ■** or **DIRECT NAVIGATOR** to return to PICTURE (JPEG) VIEW.

JPEG/MP3 playback



CD (MP3/JPEG)

The following information on the file type appears at the beginning:
Playback mode is set to MP3. Select "JPEG" from MENU in FUNCTIONS if you play pictures (JPEG).

- Confirm the information with **ENTER**.
- Press **FUNCTIONS** and confirm **MENU** with **ENTER**.
- Use **▲▼** to select the desired file type and confirm with **ENTER**.



Displaying the picture properties

- Select the desired picture and press **ENTER**.
- Press **STATUS** twice.
- Press **STATUS** again to exit the display.

Notes on pictures (JPEG, TIFF)

Compatible formats: DCF compatible (material recorded with a digital camera, etc.)*

**Design rule for Camera File system: uniform standard of the Japan Electronics and Information Technology Industries Association (JEITA).*

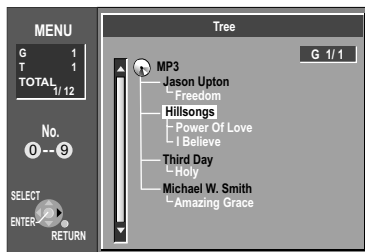
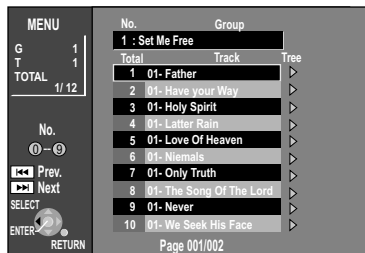
File format: JPEG, TIFF (uncompressed RGB chunky format)

Number of pixels: 34x34 through 6144x4096 (sub-scanning 4:2:2 or 4:2:0)

The unit can process up to a maximum of 999 files and 99 folders (including higher folders).

If TIFF-format pictures are to be played back or if there are a lot of files and/or folders, the procedure can take a quite some time. Some files may not be able to be displayed or played back. MOTION JPEG is not supported.

MP3 playback



Shows the track currently being played.

G : Group number

T: Track number in the group

TOTAL: Selected track number /
Total number of track numbers

No.: Selected group number

Group: Selected group name

CD (MP3)

This unit can play MP3 files that were recorded with a computer on a CD-R/RW. Files are captured as tracks and folders as groups.

“TOTAL” includes all tracks in all groups of the disc.

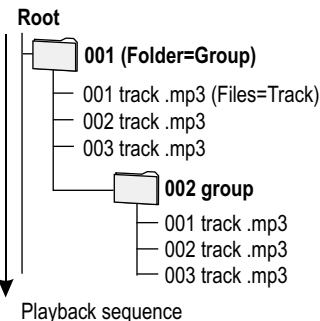
- Use **DIRECT NAVIGATOR** to launch the MENU screen.
- Use **▲▼** to select the desired track and confirm with **ENTER**. Playback continues until the last track of the selected group.
To select a track via the number buttons, press e.g. for track no. 8: 0 1 0 8 .
- Use **DIRECT NAVIGATOR** or **RETURN** to exit the MENU screen.

*Use **SKIP** **◀◀**, **▶▶** to select other tracks/groups or pages. After all tracks in a group have been displayed, the next group is listed.*

Selecting a group using the tree structure

- After selecting a track in the file list, press **▶**. The tree structure appears on the screen.
- Use **▲▼** to select the desired group.
- Use **◀▶** to switch between different levels in the screen of the tree structure.
- Confirm with **ENTER**. The selected group is displayed in the file list.
- Use **▲▼** to select the desired track and confirm with **ENTER**.

- The discs must correspond with the formats ISO9660 Level 1 or 2 and Joliet.
- Compatible compression rate: between 32 kbps and 320 kbps
- Compatible scan rate: 44.1 kHz and 48 kHz
- Maximum number of recognisable tracks and groups: 999 tracks and 99 groups
- The device is not compatible with ID3-Tags or Packet Writing.
- If there are a lot of still images or Sessions, the readout and playback of the disc can take some time.



Playback



Before playback

If you have connected the unit with an audio/video cable, an S VIDEO cable or via COMPONENT OUT, you must set the TP channel. The TP channel enables the VHS playback in high quality, e.g. via COMPONENT OUT or as RGB to AV1.

- Press **DVD** and **CH** $\wedge$, $\vee$ several times to select the TP channel.

Using video cassettes

If the video cassette is not being used, remove it from the unit and store it in a sleeve.

Avoid recording on the same tape section several times in order to prevent the cassette from wearing out prematurely.

Carefully insert the cassette into the video recorder to avoid damage.

Do not expose the video cassette to high humidity, temperature or dust particles.

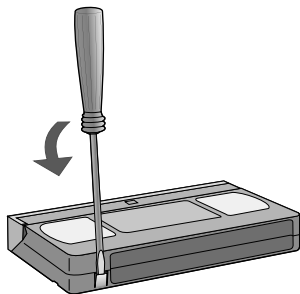
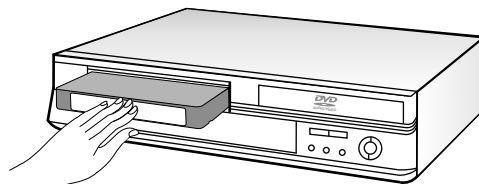
Do not use defective cassettes and do not try to repair them.

Do not open the housing of the cassette.

Do not open the protective flap on the front side of the cassette and do not touch the tape.

Use high-quality, brand-name tapes, for example from Panasonic.

During the playback of cassettes that were recorded on a different VHS recorder, you may experience a lower picture quality.



Erase protection of cassettes

To protect against the accidental erasing of cassettes, break out the erase protection tab. If you want to record on a protected cassette, cover the hole with a piece of tape.

Cleaning the video heads

Use a cleaning tape to clean the video heads.

Playback

Switch the unit on and insert a recorded video cassette.

PLAY



Playback

- Press **PLAY ►** to start the playback.

*From standby mode, you also start playback using **PLAY ►**.
The tape automatically rewinds when the end is reached. This function may not be available during a **TIMER**-controlled recording.
Playback automatically starts when you insert a video cassette whose write-protection tab was removed.*

STOP



Ending playback

- Press **STOP ■** to end playback.

PAUSE



PAUSE during playback

- Press **PAUSE ■■**.
- Press **PAUSE ■■** again to resume playback.

Slow-motion playback during playback

- Press **PAUSE ■■** for more than 2 seconds.
- Press **PLAY ►** to resume playback.

Slow-motion playback automatically stops after 10 minutes.

Still picture playback during playback

- Press **PAUSE ■■**.
- Press **PLAY ►** to resume playback.

Still picture playback automatically stops after 5 minutes.



SLOW/
REW SEARCH FF



Image search forwards ►► or backwards ◀◀

- During playback, press ►► or ◀◀.
- The search speed increases by pressing the button twice (JET SEARCH).
- If you press and hold the button, the image search lasts as long as the button is depressed.
- Press **PLAY ►** to resume playback.

The image search forwards/backwards automatically stops after 10 minutes.

Fast forwarding ►► or rewinding ◀◀

- In stop mode, press ►► or ◀◀.
- Press **STOP ■** to end the forward/rewind function.

TIME SLIP
◀◀ JET REW



◀◀ JET REW

For fast rewinding to the beginning of the cassette.
Approx. 43 second with an E180 cassette.

Depending on the video cassette or the operating conditions, the rewind speed varies and may not be possible. The counter is reset to "0:00.00" when the tape is rewound to the beginning.

Endless playback

The video recorder repeats the recordings of a cassette until the end of the recording.

- Press **PLAY ►** for more than 5 seconds during playback or in stop mode. [RP] appears in the video recorder's display.
- Press **STOP ■** to end the playback.

Playback



VHS index search system (VISS)

This unit records special index signals with each recording. The index search function uses these signals. Thus, you can quickly find the beginning of a desired recording. You can search for up to 20 index signals.

- Press **INDEX** during the recording or in stop mode. ►► tape forwards / ◄◄ tape rewinds. The unit automatically begins playback when the index signal is found. The number of jumps increases with each press of the button.
- Press **STOP** ■ to end the search.

If the index signals are too close together, this function may not work. Thus, the recordings should be at least 5 minutes long.

VHS playback with high picture quality

You can play video cassettes in a high picture quality via the TP channel (copy input channel) in progressive or RGB mode. The television must be RGB- or progressive-capable.

- Press **DVD** and use **CH** ^, v to select the TP channel.
- Press **VHS** and then **PLAY** ►. Playback begins.

S-VHS Quasi Playback (SQPB)

It is possible to playback cassettes that were recorded on an S-VHS unit. The picture quality is similar to a VHS recording. Depending on the video tape used, slight image distortions can occur. An S-VHS recording is not possible with this unit.

Setting the track position manually

The unit automatically sets the track position. If a cassette was recorded on another unit, it may be necessary to set the track position manually if you experience distortions.

The picture is noisy or unclear during playback.

- During normal or slow-motion playback, press **TRACKING/V-LOCK** + / -, until the noise disappears.
If the still picture is noisy, first switch the unit to slow-motion and then set the track position.



* *Some video cassettes do not allow the track position to be controlled. This is not a functional problem.*

Control the track position automatically

- Press **TRACKING/V-LOCK** + and - simultaneously to go back to automatic tracking.

With some televisions, the picture can be displaced up or down during some special playback functions. These are not functional problems.

Recording



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RAM -R -RW/+R You can record up to 99 titles on one disc (+R: 49 titles).

If you use an unformatted DVD-RAM, you must format it before the first recording. 81
The recording is saved in free areas on the disc. If there is no more space left on the target drive, you must delete recordings or use a new disc.

When recording dual-channel TV programmes on DVD-R, DVD-RW or +R, only one audio channel [M1] or [M2] can be recorded.

RAM If you have activated the write-protection, cancel it.

Recording television programmes

- Use **CH** $\wedge$, $\vee$ or the number buttons to select the TV channel.
- Use **INPUT SELECT** to select the AV channel for externally connected devices.
- Press **REC MODE** to select the recording mode.
- Press **● REC** to start the recording.
- Press **STOP ■** to stop the recording.

Up until the recording is stopped, it counts as 1 title. After recording to disc is complete, it takes some time for the unit to process the information for device control.

RAM Using **AUDIO**, you can change the received audio channel during the recording. It has no effect on the recorded audio channel.

RAM -R -RW/+R You can only change the channel or the record mode in pause mode. The material is then recorded as a separate title.

Pause during recording

- Press **PAUSE ■■** to pause the recording.
- Press **PAUSE ■■** again to resume recording.

The title is not divided.

Recording



Q-Link

If you have an IDTV with EPG (electronic programme guide) function for digital broadcast, you can perform timer recording using the EPG function. Refer to the televisions operating instructions for further informations.



Current recording

Providing a time for the end of the recording

- During record, press **● REC** on the unit.
The unit display changes with each press of the button:
Counter 30 → 60 → 90 → 120 → 180 → 240 → Counter
This is not possible with FLEXIBLE REC or TIMER-controlled recordings.
*If you press **STOP ■**, the recording will be stopped and the time setting deleted.*

DIRECT TV REC

Direct TV recording (only for DVD recording)

If your television is equipped with analogue tuner and Q Link functionality, you can directly record the programme that you are watching on TV. The programme position shown on the unit automatically switches to the appropriate TV programme.

- Press **DIRECT TV REC** for 3 seconds. The recording begins.
- Press **STOP ■** to end the recording.

If the station transmits video text information and the Title Page is set properly, the programme and station names are recorded automatically. Launching the titles with this unit can take approx. 10 minutes and may fail in some cases.

Playback during recording

During recording, you can start playback from the beginning of the programme.

- Press **PLAY ►** during the recording or **TIMER**-controlled recording.
The playback can only begin if at least 2 seconds have passed since the start of the recording.

Simultaneous recording and playback

- Press **DIRECT NAVIGATOR** during the recording or **TIMER**-controlled recording.
- Use **◀▶▶▲** to select a title and confirm with **ENTER**.
- Press **DIRECT NAVIGATOR** again to exit the title view.

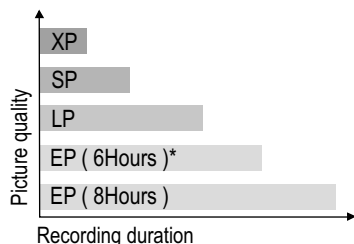
*If you start the playback while the unit is in standby mode for a **TIMER**-controlled recording, the recording will begin at the programmed time.*

Recording



VHS recording/playback during a DVD recording

While a channel is being recording on DVD, you can record another one on VHS.



* Only if the Recording time in EP mode setting in the SETUP menu is set to [EP (6Hours)].

	DVD-RAM		DVD-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 (6Hours)	6	12	6
EP (8Hours)	8	16	8

Recording modes and approximate recording times in hours

When recording on DVD-RAM in EP mode (8Hours), playback may not be possible on DVD-RAM-compatible DVD players. In this case, select EP mode (6Hours).

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Selecting an audio channel to be recorded in two-channel sound **[R] [RWV] [R]**

- In the Sound SETUP menu, select the Bilingual Audio Selection [M1] or [M2] setting.

FLEXIBLE REC (FR) **[RAM] [R] [RWV] [R]**

The unit calculates the best possible recording quality between XP and EP. It will be adjusted to fit on the available space on the disc. This function is not possible during an EXT LINK recording.

- In stop mode, press **FUNCTIONS**.
- Use **▲▼** to select [To Others] and press **ENTER**.
- Use **▲▼** to select **FLEXIBLE REC** and press **ENTER**.
- Use **▲▼◀▶** to select the required recording time.
- Use **▲▼◀▶** to select [Start] and confirm with **ENTER**. The recording begins.
- Press **RETURN** to exit the **FLEXIBLE REC** window.

- Press **STOP ■** to cancel the recording before the end has been reached.

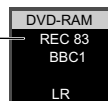
Neither the channel nor the recording mode can be changed in PAUSE mode.

Displaying the available recording time

- Press **STATUS** several times.



The available time in minutes.



TIMER-controlled recordings



RAM -R -RWV +R You can programme up to 16 programmes per month in advance. Insert a disc.

VIDEO Plus+

Programming recordings with VIDEO Plus+

By entering a VIDEO Plus+ number, the **TIMER**-controlled recording is easy to set. The appropriate codes can be found in newspapers and TV guides.

- Press **VIDEO Plus+**.
- Enter the VIDEO Plus+ number using the number buttons. Use **◀** to delete a number.
- Confirm the VIDEO Plus+ number with **ENTER**.

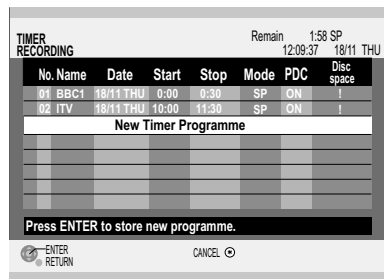
In the **TIMER RECORDING** screen, check the start and end time and the PDC function.

If [-] is displayed under Name, use **▲▼** to select the desired programme position.

- Use **◀▶**, **▲▼** to select the recording mode. (XP, SP, LP, EP, FR)
If you selected PDC [ON], recording mode FR is not possible.
- If you want to enter the programme name, use **◀▶** to select [Programme Name] and confirm with **ENTER**.
- Once you have performed all changes, save the programme with **ENTER**.
- To continue programming, select [New Timer Programme].
- Press **⌚** **TIMER** to switch the unit to timer standby mode.
The **⌚** symbol lights up in the unit display.
- To cancel or pause the recording, press **⌚** **TIMER** again.

VIDEO Plus+ is a trademark of Gemstar Development Corporation. The VIDEO Plus+ system is manufactured under licence from Gemstar Development Corporation.

TIMER-controlled recordings



PROG/CHECK

Manual programming

- Press **PROG/CHECK**. The **TIMER RECORDING** screen appears.
- Confirm the highlighted line with **ENTER**.
- Use **▲▼** to select the name of the TV station.
*If [-] is displayed under Name, use **▲▼** to select the desired programme position.*
- Use **▶** to switch to the next field and change entry using **▲▼**.
Name, Date, Start and Stop can also be entered using the number buttons.

Name: Programme position/name of the TV station.

Date: You can also programme titles to be recorded on a daily or weekly basis.

Start: Start time / **Stop:** Stop time

*If you press and hold the **▲▼** buttons, the time increases/decreases in 30-minute increments.*

Mode: Recording mode (XP, SP, LP, EP, FR)

If you selected PDC [ON], recording mode FR is not possible.

PDC: [On] or [OFF]

If the television station sends PDC signals, the beginning and end of a recording are synchronised with the current air time. The programme start time must be set correctly to the start time given in the magazine.

Programme Name: You can enter the title of the programme.

- If you want to enter the programme name, use **◀▶** to select [Programme Name] and confirm with **ENTER**.
- Once you have made all changes, save the programme with **ENTER**.
- To continue programming, select [New Timer Programme].
- Press **⏸** **TIMER** to switch the unit to timer standby mode.
The **⏸** symbol lights up in the unit display.
- To cancel or pause the recording, press **⏸** **TIMER** again.

RAM *If you record several programmes in a row, the first few seconds of the second programme are not recorded on the disc,*

-R **•RWV** **•R** approx. 30 seconds.

TIMER-controlled recordings



TIMER RECORDING Remain 1:58 SP 18/11 THU 12:09:37

No.	Name	Date	Start	Stop	Mode	PDC	Disc space
01	BBC1	MON-SAT	8:00	8:30	SP	ON	→ 10.2
02	ITV	18/11 THU	15:00	15:30	SP	ON	OK
03	CH4	18/11 THU	10:30	11:30	SP	ON	!

New Timer Programme

ENTER RETURN CANCEL

Symbols in the TIMER RECORDING menu

- This programme is currently being recorded.
- W The programme overlaps other programmes.
- F The disc was full or the highest number of programmes or scenes was reached so that the programme could not be recorded.
- ⊠ The television programme was copy-protected so that the programme could not be recorded.
- ⊗ The programme could not be recorded for another reason.

Storage space on the disc

OK: There is enough storage space available on the disc for the recording. If PDC is switched on during the recording, then the entire programme will probably not be recorded.

➔ **(Date):** For recordings that are made daily or weekly, the display indicates whether there is enough storage space on the disc.

!: Is displayed if the disc is not in the unit, is write-protected or does not have enough storage space.

PROG/CHECK

Checking, changing or deleting TIMER RECORDINGS

- Press **PROG/CHECK**.
- Use **▲▼** to select the TIMER RECORDING.

Checking or changing

Check the settings or correct them if necessary using **ENTER** and **▲▼◀▶**. Confirm your changes with **ENTER**.
Programmes that are currently being recorded cannot be changed.

Deleting

Delete a programme with * **CANCEL/RESET**.
Programmes that are currently being recorded cannot be deleted.

*If you selected PDC [On], **TIMER**-controlled recordings are deleted from the list after two days.*

Make sure that the unit is switched to timer standby mode.
The ⊙ symbol lights up in the unit display.

PDC function

Programme Delivery Control adjusts the start and stop time of a timer recording automatically to ensure the recording starts and finishes in line with the programme broadcast.

This is useful when a programme over-runs the published times.

The station must be transmitting PDC and the exact time must be set for PDC to work. The DVD Recorder detects whether a station is transmitting PDC only during the tuning process. If PDC is introduced or discontinued by a station you will need to re-tune the DVD Recorder before it becomes aware of this.

PDC transmissions are not currently nation-wide so please check with your local broadcaster for more information.

ON : The station transmits PDC signals. You must set the timer to the time specified in the TV magazines.

OFF: If you do not want to use the PDC signals, you can turn them off.

- - - : The station does not transmit PDC signals. Try to set the start and stop time such that the entire film can be recorded even if a programme begins or ends earlier or later than planned.

Recording



Recording time for E-240 cassettes

SP - Normal mode: approx. 4 hours

LP - Long-Play mode: approx. 8 hours

EP - Extra-Long-Play mode: approx. 12 hours

If you value a high-quality picture, select SP.

Recording television programmes

- Insert a video cassette with an intact write-protection tab.
- Use **CH** Δ , ∇ to select the channel.
- Press **REC MODE** to select the tape speed.
With each press of the button, the display switches from: SP $\rightarrow$ LP $\rightarrow$ EP $\rightarrow$ SP.
- Press **● REC** to start the recording.
- Press **STOP ■** to stop the recording.
- Press **PAUSE ■■** to pause the recording.

If the recording is paused for more than 5 minutes, the unit switches to stop mode. If you press the button again, the recording will start again.

During the recording, you can playback or record to discs.

The recording to VHS will not be compromised.

Even with an S-VHS video cassette, you cannot perform recordings in the S-VHS system with this unit. The recording takes place in the normal VHS system.

Displaying the approximate time remaining on the cassette

- Press **FUNCTIONS**.
- Select the desired tape length in the VHS FUNCTIONS menu.
- Press **STATUS** several times until the time remaining on the tape appears in the unit display. With each press of the button, the display changes as follows:

Current time $\rightarrow$ Operating state and tape counter $\rightarrow$ Time remaining $\rightarrow$ Current time

Depending on the video cassette used, the time remaining on the video cassette may not be displayed correctly.

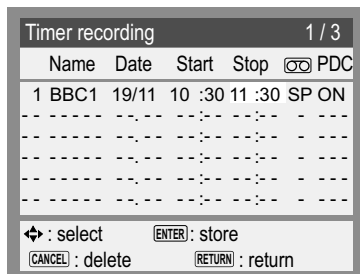
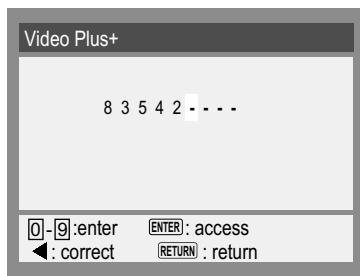
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Setting a time for the end of the recording

- During the recording, press **● REC** on the unit. With each press of the button, the display of the unit changes: Counter $\rightarrow$ 30 $\rightarrow$ 60 $\rightarrow$ 90 $\rightarrow$ 120 $\rightarrow$ 180 $\rightarrow$ 240 $\rightarrow$ Counter
- If you press **STOP ■**, the recording will be stopped and the time setting will be deleted.

*This is not possible for **TIMER**-controlled recordings or for recordings via an external device. If the tape speed is changed during the recording, a brief image distortion will appear at that spot.*

TIMER-controlled recordings



VIDEO Plus+

Programming recordings with VIDEO Plus+.

- Insert a video cassette with intact write-protection tab.
- Press **VIDEO Plus+**.
- Enter the VIDEO Plus+ number using the number buttons.
Use ◀ to delete a number.
- Confirm the VIDEO Plus+ number with **ENTER**.

In the Timer recording screen, check the start and end time and the PDC function.

If [- -] is displayed under Name, use ▲▼ to select the desired programme position.

- Use ◀▶, ▲▼ to select the recording mode [A, SP, LP, EP].
- Save the programme using **ENTER**.
- Press ⏸ **TIMER** to switch the unit to timer standby mode.
The ⏸ symbol lights up in the unit display.

Automatic SP/LP switching

A: If the remaining tape time is not sufficient to start a programmed recording, then the SP/LP function switches to the LP tape speed. This ensures that the entire programme is recorded. If the remaining time on the tape is also not enough in LP mode, then the programme cannot be recorded in full. An automatic switching to EP mode is not possible.

When recording in the NTSC system, the function may not work.

TIMER-controlled recordings



Timer recording 1 / 3

Name	Date	Start	Stop	PDC
1 BBC1	19/11	10:30	11:30	SP ON
-----	-----	-----	-----	-----
-----	-----	-----	-----	-----
-----	-----	-----	-----	-----
-----	-----	-----	-----	-----
-----	-----	-----	-----	-----

⬅ : select (ENTER) : access
 (CANCEL) : delete (RETURN) : return

Timer recording 1 / 3

Name	Date	Start	Stop	PDC
1 BBC1	19/11	10:30	11:30	SP ON
2 ITV	-----	-----	-----	SP ON
-----	-----	-----	-----	-----
-----	-----	-----	-----	-----
-----	-----	-----	-----	-----
-----	-----	-----	-----	-----

⬅ : select (ENTER) : store
 (CANCEL) : delete (RETURN) : return

PROG/CHECK

Manual programming

- Press **PROG/CHECK**. The Timer recording screen appears.
- Confirm the highlighted line with **ENTER**.
- Use **▲▼** to select the name of the TV station.
If [- -] is displayed under Name, use **▲▼** to select the desired programme position.
- Use **▶** to switch to the next field and change the entry with **▲▼**.
Name, Date, Start and Stop can also be entered using the number buttons.
Name: Programme position/name of the TV station
Date: You can also programme titles to be recorded on a daily or weekly basis.
Start: Start time / **Stop:** Stop time
Press and hold the **▲▼** buttons to increase/decrease the time in 30-minute increments.
PDC: Recording mode (A, SP, LP, EP)
PDC: [ON] or [OFF]
- Once you have made all changes, save the programme with **ENTER**.
- Press **⏸ TIMER** to switch the unit to timer standby mode.
The **⏸** symbol lights up in the unit display.
- To cancel or pause the recording, press **⏸ TIMER** again.
The **⏸** symbol turns off.

Checking, changing or deleting programmes

- Press **PROG/CHECK**.
- Use **▲▼** to select the programme to record.

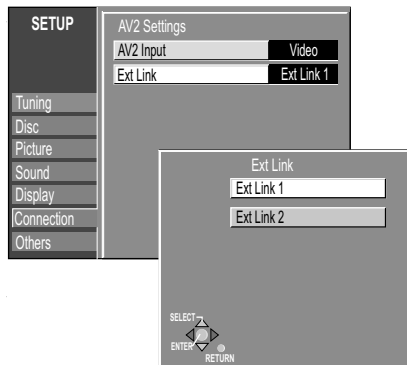
Checking or changing

Check the settings or correct them if necessary using **ENTER** and **▲▼◀▶**. Confirm your changes with **ENTER**.
Programmes that are currently being recorded cannot be changed.

Deleting

Delete a programme with *** CANCEL/RESET**.
Programmes that are currently being recorded cannot be deleted.
Make sure that the unit is in timer standby mode.
The **⏸** symbol lights up in the unit display.

TIMER controlled recordings



Ext Link 1:

For digital receivers that send a special recording control signal, e.g. the F.U.N. receiver (TU-DSF41).

Ext Link 2:

External recording control for satellites or digital receivers (video signal).

If the television is connected to the AV1 connection via the 21-pin Scart cable, the picture to be recorded appears on the screen.

The beginning of the recording may not be recorded correctly in certain cases.

The Ext Link 2 setting cannot be used if the input signal is in NTSC format.

Before TIMER recordings via external devices

You control the recording function via an external device (e.g. receiver) using **EXT LINK**. Connect the external device with a 21-pin Scart cable to the AV2 socket.

Adjust the Ext Link function for the connected device.

Switch the remote control to **DVD**.

- Press **FUNCTIONS**, use ▼▲ to select [To Others] and press **ENTER**.
- Use ▼▲ to select **SETUP** and press **ENTER**.
- Use ▼▲ to select **Connection**, ►, ▼▲ to select **AV2 Settings** and press **ENTER**.
- Use ▼▲ to select **Ext Link** and confirm with **ENTER**.
- Use ▼▲ to select [Ext Link 1] or [Ext Link 2] and confirm with **ENTER**.

If you selected the AV2 Connection [Decoder (DVD) or (VHS)] setting, the Ext Link feature is not available.

TIMER recordings via external devices (EXT LINK)

The programming of the recording must take place on the external device. The recording begins when a corresponding signal is received from the connected device. As long as a video picture is transmitted by the external device, the selected element records it.



- Press **EXT LINK**.

Standby mode for **TIMER**-controlled recordings is activated on the DVD element. EXT L lights up on the display.

During standby mode, you can play DVD-RAMs or VHS cassettes or record to VHS.



- Switch the remote control to **VHS**.

- Press **EXT LINK**. The VHS element switches to record standby mode. EXT L lights up on the display.

During standby mode, you can play or record discs.

Switching off control via the external device

- Press **EXT LINK** to end the recording or to switch off the standby mode for the **TIMER**-controlled recording. The EXT Link display turns off.

TIMER recording from Sat with VIDEO Plus+



Video Plus+

8 3 5 4 2 - - -

Timer recording 1/3

Name	Date	Start	Stop	PDC
-- -- --	10:30	11:30	SP	---
-- -- --	- / -	--:--	--:--	- ---
-- -- --	- / -	--:--	--:--	- ---

Invalid entry

Timer recording 1/3

Name	Date	Start	Stop	PDC
A2 AV2	26/10	10:30	11:30	SP ON
-- -- --	- / -	--:--	--:--	- ---
-- -- --	- / -	--:--	--:--	- ---
-- -- --	- / -	--:--	--:--	- ---
-- -- --	- / -	--:--	--:--	- ---

VIDEO Plus+ Codes for Satellite Receivers / Set Top Box

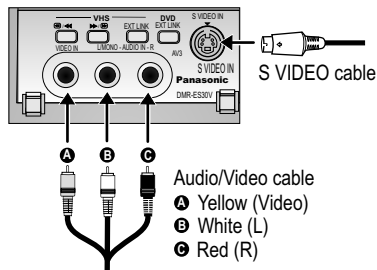
This DVD Recorder is not designed to control (switch on or change channel) your satellite receiver or Set Top Box, however, it can be taught to recognise VIDEO Plus+ Codes for Satellite stations. The Satellite Receiver or Set Top Box must be switched on and the correct station selected. Some receivers have their own timer facility for this purpose. Please refer to your Satellite Receiver/Set Top Box instructions for use of such timer facilities.

For your DVD Recorder to recognise the VIDEO Plus+ Codes for each satellite station, you must teach your DVD Recorder which channel or AV input to record from for the first time. Otherwise when setting a VIDEO Plus+ recording, the [-] symbol will appear in the channel position indicating that the DVD Recorder does not know which channel position to set. Once you have set the channel/AV input once the DVD Recorder will remember it whenever you use a VIDEO Plus+ Code for the station again.



- Press the **VIDEO Plus+** button.
- Enter a VIDEO Plus+ Code from a Satellite TV Guide for a satellite channel, e.g. Sky 1 using the **Numeric** buttons. Press **◀** to correct any mistakes.
- Press the **ENTER** button. [-] will appear instead of a channel number/AV input.
- Press the **▲▼** to select the channel or AV input that is to be used for recording from the satellite channel.
- Press the **ENTER** button to memorise the setting. The DVD Recorder will now automatically set the programme position or AV input correctly when a VIDEO Plus+ recording is set for this satellite station in the future.
- Press **▲▼** to select the programme that you have just set. Now press the **CANCEL/RESET** button to delete it from the timer recording list. It is no longer needed.
- Repeat the steps above until you have set and deleted dummy timer recordings for each of the satellite stations that you will make VIDEO Plus+ recordings from.
- Press **RETURN** when you have finished.

Recording from an external device, e.g. a camera



Connect the external device to the AV3 input sockets on the front side of the unit.

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Recording to VHS

Insert a video cassette with intact write-protection tab.



- Press **REC MODE** to select the recording mode.
- In stop mode, use **INPUT SELECT** to select the input channel AV3.
- Press **PLAY ►**. At the point where you want to begin recording, press **PAUSE ■■**.
- Press **● REC**.
- Start the playback on the external device.
- Press **PAUSE ■■** to start recording.
- Use **STOP ■** to stop recording.

Recording to DVD

 If you activated the write-protection, deactivate it.



- Press **REC MODE** to select the recording mode.
- In stop mode, use **INPUT SELECT** to select the input channel AV3.
- Start the playback on the external device.
- Press **● REC** at the point where you want to begin recording.
- Use **STOP ■** to stop recording.

Press **PAUSE ■■** to pause recording. Press the button to resume recording.



DC channel (copy input channel)

If you select the DC channel, the VHS element can receive and record video/audio signals from DVD.



- To select the DC channel press **CH ▲, ▼** or **INPUT SELECT** several times.

TP channel (copy input channel)

If you select the TP channel, the DVD element can receive video/audio signals from VHS and copy to DVD.



- To select the TP channel press **CH ▲, ▼** or **INPUT SELECT** several times.

You cannot select the DC channel and the TP channel at the same time.

Recording of bilingual programmes

 If [M1] and [M2] are selected on the connected device, you can choose the audio mode during playback.

 **● [R] [RW] [R]** Select [M1] or [M2] on the connected device. You cannot select the audio mode during playback. If the output signal of the external device is an NTSC signal, set the TV system in the SETUP menu to [NTSC].

This unit cannot record signals from PCs.

Manually Copying / DUBBING



Manually Copying to DVD **RAM -R -RWV -R**

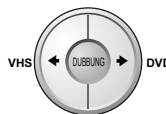
-  • Start the playback.
- Press **PAUSE** ■ where you want to start recording.
-  • Use **REC MODE** to select the recording mode.
- Use **INPUT SELECT** to select the TP channel.
- Press **● REC** to start recording.
- Use **STOP** ■ to stop recording.

Manually Copying to VHS

-  • Start the desired title.
- Press **PAUSE** ■ where you want to start recording.
-  • Use **REC MODE** to select the recording mode.
- Use **INPUT SELECT** to select the DC channel.
- Press **PLAY** ►. Press **PAUSE** ■ where you want to start the recording.
- Press **● REC**.
- Then press **PAUSE** ■ to start recording.
- Use **STOP** ■ to stop recording.

*You can not execute the dubbing procedure while the DVD or VHS unit is in standby mode for the **TIMER**-controlled recordings. Cancel the standby mode.*

*When copying from DVD to VHS, the index signal for each title is recorded automatically.
When copying from VHS to DVD, the title is automatically created for each index signal.*



With this function, you can copy directly from VHS to DVD or from DVD to VHS.

RAM -R -RWV -R -RWV Video cassettes can be copied to DVD-RAM and unfinalised DVD-R/-RW. The copying of DVD-Video or finalised DVD-R/-RW to VHS is possible. Recording is cancelled in the case of copy-protected media.

Insert a video cassette and a disc.

- Use **REC MODE** to select the recording mode.
- Select the desired starting position for VHS.

You can select the DVD start position in **DIRECT NAVIGATOR** or in **PLAYLISTS**

- Press **FUNCTIONS**, confirm **DIRECT NAVIGATOR** with **ENTER**, or with **▼▲ To Others → ENTER → PLAYLISTS → ENTER**.
- Use **▼▲◀▶** to select the desired title and confirm with **ENTER**.
- Press **STOP** ■ to activate the title for Dubbing.
- Use **RETURN** to exit the menu.
- Switch DVD and VHS to stop mode.
- Press **◀ VHS** or **DVD ▶ DUBBING**. **START** blinks in the unit display.
- Press and hold **◀ VHS** or **DVD ▶ DUBBING** for approx. 3 seconds. The **START** display turns off and the dubbing procedure starts.
- To cancel the dubbing procedure, press **STOP** ■ or **RETURN** for 3 seconds.

No other functions are possible during the copy procedure. When copying from DVD to VHS, recording starts at the beginning of the title.

RAM -RWV When copying from DVD to VHS or VHS to DVD, use **AUDIO** to select the desired channel for dual channel sound.

FUNCTIONS Selection Menu

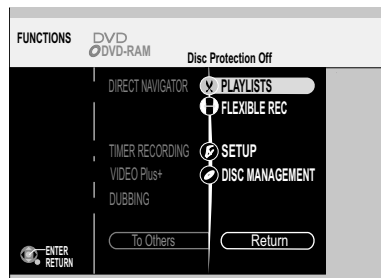
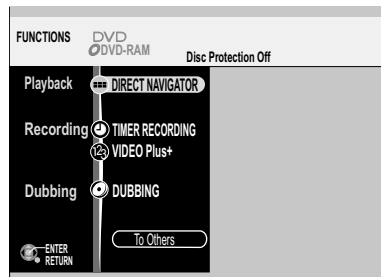
FUNCTIONS



You can access the main functions via the FUNCTIONS selection menu.

The illustrations show DVD-RAM menus. The menu entries can be different depending on the disc or medium. MP3/JPEG, see page 35-37.

- Press **FUNCTIONS** in stop mode.
- Use **▼▲** to select a menu and confirm with **ENTER**.
- Use **▼▲** to select an option and confirm with **ENTER**.
- To view the second screen page, use **▼▲** to select [To Others] and confirm with **ENTER**.
- To return to the first page, use **▼▲** to select [Return] and confirm with **ENTER**.
- Press **FUNCTIONS** to exit the selection menu.



DIRECT NAVIGATOR Edit titles and chapters, protect recordings.

56 - 61

TIMER RECORDING Programme recordings

45 - 46

VIDEO Plus+ Programme recordings with VIDEO Plus+

44

DUBBING Copy VHS to DVD and DVD to VHS.

62 - 64

To Others

Open the 2nd screen page

PLAYLISTS Create and edit playlists.

65 - 68

FLEXIBLE REC Automatic selection of the recording mode.

43

SETUP Change the unit's default settings.

69 - 79

DISC MANAGEMENT Format and finalize discs, write protection.

80 - 82

Return

Back to 1st screen page

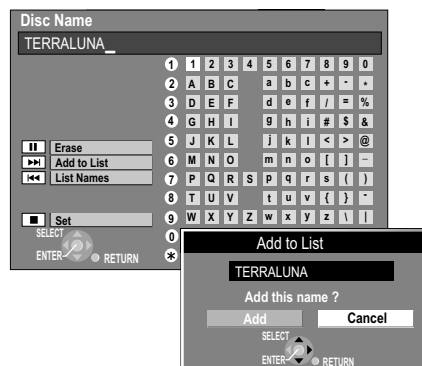
FUNCTIONS Selection Menu

FUNCTIONS



Entering Text **RAM** **R** **RW/V** **R**

You can give discs or programmes titles in various menus:
In DIRECT NAVIGATOR, in PLAYLISTS, in DISC MANAGEMENT and when setting the **TIMER**-controlled recording.

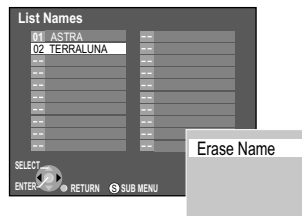


Entering a Disc Name or Title via the Menu

- Use **▲▼** to select the desired character and confirm with **ENTER**.
- Use **PAUSE** **||** to delete a letter.
- If you want to save the name/title in the List Names, press **SKIP** **▶▶**.
- Use **◀** to select [Erase] in the next screen and confirm with **ENTER**.
- If you press **STOP** **■**, the name/title is saved.

Entering a Title via the Number Buttons, e.g. : the Letter "R"

- Press [7] to go to the 7th line.
- Press [7] twice to select "R" and confirm with **ENTER**.



Erasing a Disc Name or Title from List Names

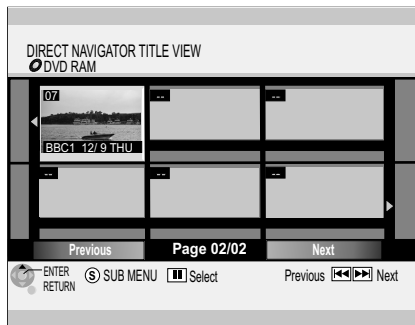
- Use **◀◀** **SKIP** to open List Names.
- Use **▼▲** to select the title or name and press **SUB MENU**.
- Confirm [Erase Name] with **ENTER**.
- Use **◀** to select [Erase] in the next screen and confirm with **ENTER**.

Accepting a Disc Name or Title from List Names

- Use **◀◀** **SKIP** to open List Names.
- Use **▼▲** to select the disc name or title confirm with **ENTER**.

FUNCTIONS Selection Menu

FUNCTIONS



Editing Several Elements

- Use **▼▲◀▶** to select the desired title and press **PAUSE** **|||**. A check appears. Repeat this process to select other titles.
- Press **PAUSE** **|||** again to cancel.

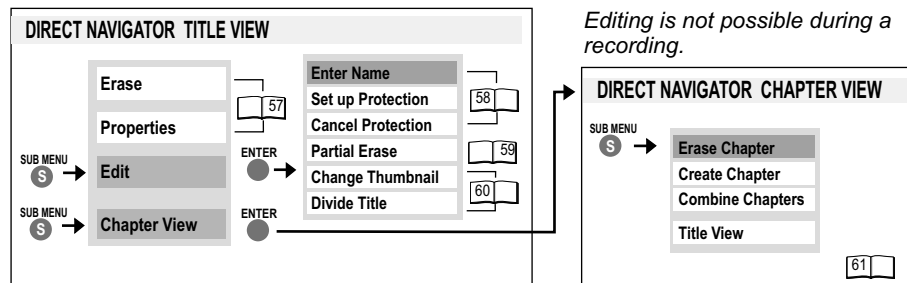
DIRECT NAVIGATOR

In DIRECT NAVIGATOR, you can archive, edit or start recordings after selecting a title.

- Press **FUNCTIONS** in stop mode.
- Confirm DIRECT NAVIGATOR with **ENTER**.
Use **▼▲◀▶** [Previous] or [Next] to select other pages and press **ENTER**.
- Select the desired title and start playback with **ENTER**.

Editing Titles and Chapters with the SUB MENU

- You can access further sub menus with **SUB MENU**.



Symbols in DIRECT NAVIGATOR

- The programme is write-protected.
- The programme is copy-protected.

N/P NTSC/PAL: The programme was recorded in an image format that does not correspond with the TV system selected in the unit.

- The programme cannot be played back.
- The programme is currently being recorded.

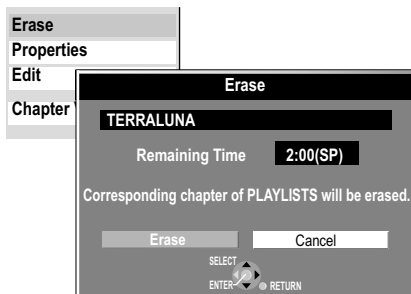
FUNCTIONS Selection Menu

FUNCTIONS



DIRECT NAVIGATOR

You can delete titles in DIRECT NAVIGATOR or playback lists in PLAYLISTS. This deletes the title or playback list and it cannot be recovered.



DIRECT NAVIGATOR

Erase **RAM -R -RWV +R**

- Confirm [Erase] with **ENTER**.
- Use **◀** to select [Erase] and confirm with **ENTER**.

*The available recording time may remain the same after erasing short titles.
The recording time on DVD-R/DVD+R remains the same.*

To edit several elements, use **▼▲◀▶** to select the desired title and press **PAUSE ||**.

To Others

PLAYLISTS

65

Erase **RAM**

- Confirm [Erase] with **ENTER**.
- Use **◀** to select [Erase] and confirm with **ENTER**.

Information on the playback list is displayed in DIRECT NAVIGATOR or in PLAYLISTS.

Properties **RAM -R -RWV +R -RWVR**

Time and date is displayed.

- Use **▼▲** to select [Properties] and confirm with **ENTER**.

Properties **RAM**

Chapter and date is displayed.

- Use **▼▲** to select [Properties] and confirm with **ENTER**.

FUNCTIONS Selection Menu

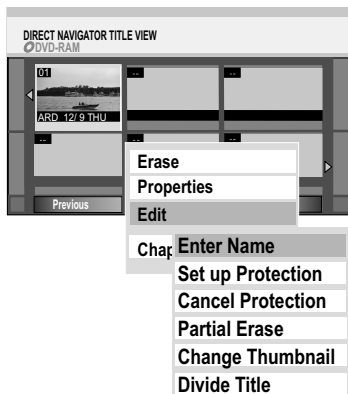
FUNCTIONS



Erase
Properties



Chapter View



DIRECT NAVIGATOR

- Press **FUNCTIONS**
- Confirm DIRECT NAVIGATOR with **ENTER**.
- In the TITLE VIEW menu, use **▼▲◀▶** to select the desired title.
You can also enter the title with the number buttons. If you enter a number that is larger than the total number of the title, then the last title is selected.
- Press **SUB MENU**, select the desired option and confirm with **ENTER**.
- Use **RETURN** to go back to the TITLE VIEW.
- Press **RETURN** again to exit the screen.

Enter Name **RAM** **R** **·RWV** **·R**

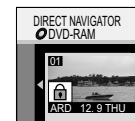
The complete name is displayed in the sub-menu [Properties].

- Confirm [Enter Name] with **ENTER**.
- Change or enter the title of the programme.



Set up Protection **RAM**

- Use **▼▲** to select [Set up Protection] and confirm with **ENTER**.
- Use **◀** to select [Yes] and confirm with **ENTER**.
A padlock is displayed.



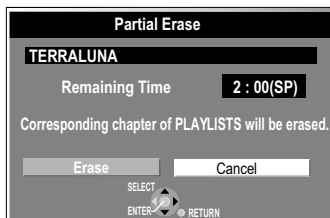
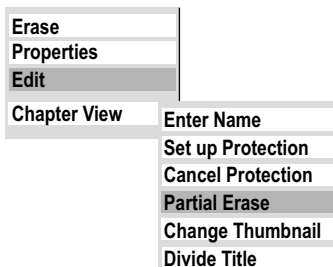
Cancel Protection **RAM**

- To cancel the protection, use **▼▲** to select [Cancel Protection] and confirm with **ENTER**.
- Use **◀** to select [Yes] and confirm with **ENTER**.
- The padlock disappears.

*To edit several elements, use **▼▲◀▶** to select the desired title and press **PAUSE** **||**.*

FUNCTIONS Selection Menu

FUNCTIONS



DIRECT NAVIGATOR

- Press **FUNCTIONS**.
- Confirm DIRECT NAVIGATOR with **ENTER**.
- In the TITLE VIEW menu, use **▼▲◀▶** to select the desired title.
- Press **SUB MENU**.
- In the sub menu, use **▼▲** to select [Edit] and confirm with **ENTER**.

Partial Erase RAM

Before you start erasing, make sure that you really want to erase the recordings.

- Use **▼▲** to select [Partial Erase] and confirm with **ENTER**.
- At the desired start point, confirm [Start] with **ENTER**.
- At the desired end point, confirm [End] with **ENTER**.
- Confirm [Next] with **ENTER**.
- In the following screen, use **◀** to select [Erase] and confirm with **ENTER**.
After the erase procedure, you can select the next start and end point.
- Confirm [Next] again with **ENTER**.
- Use **▼▲** to select [Erase] and press **ENTER**.
- To exit the menu, use **▼▲** to select [Exit] and press **ENTER**.

Use **PAUSE** **■** and **SKIP** **◀◀**, **▶▶** to jump to the beginning or end of a title. You can search for begin and end points with **SLOW/SEARCH** **◀◀**, **▶▶** or **TIME SLIP**.

You may not be able to detect begin and end points if they are less than 3 seconds apart or if the recorded picture was a still image.

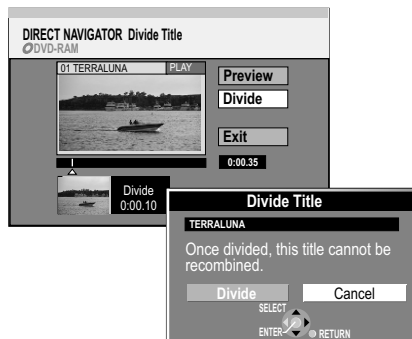
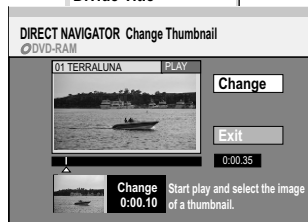
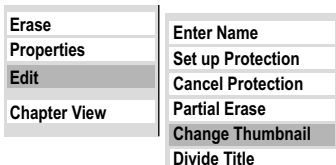
The unit switches to pause, when the end of the track is reached.

The available recording time on the disc may remain the same after the erase process.



FUNCTIONS Selection Menu

FUNCTIONS



DIRECT NAVIGATOR

- Press **FUNCTIONS**.
- Confirm DIRECT NAVIGATOR with **ENTER**.
- In the TITLE VIEW menu, use **▼▲◀▶** to select the desired title.
- Press **SUB MENU**.

In the sub menu, use **▼▲** to select [Edit] and confirm with **ENTER**.

Change Thumbnail **RAM -R -RW/+R**

You can select an image to be displayed as a preview in the title view.

- Use **▼▲** to select [Change Thumbnail] and confirm with **ENTER**.
- Press **PLAY ▶** to start the playback.
- Press **ENTER** at the image that you want to display.
- Confirm [Exit] with **ENTER**. The displayed preview is exchanged for this image.

Divide Title **RAM**

You can divide a selected title. A divided title cannot be reunited again.

- Use **▼▲** to select [Divide Title] and confirm with **ENTER**.
- With **SLOW/SEARCH◀▶** and **PAUSE ■**, find the spot where you want to divide the title and confirm [Divide] with **ENTER**.
- Confirm [Preview] with **ENTER**. The playback will take place 10 seconds before to 10 seconds after the dividing point.
- Use **▼▲** to select [Exit] if you want skip the preview.
- Confirm [Exit] with **ENTER**.
- In the Divide Title screen, use **◀** to select [Divide] and confirm with **ENTER**.

This function cannot be used if the resulting sections are extremely short or if the total number of the title is more than 99 (DVD-RAM).

A short section of the recording right before the dividing point can be lost. The divided titles have the same name as the original title.

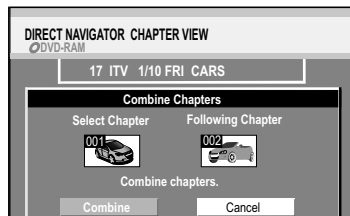
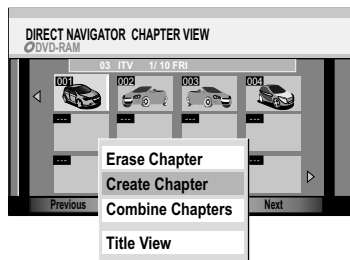
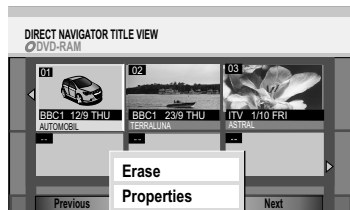


FUNCTIONS Selection Menu

FUNCTIONS



DIRECT NAVIGATOR



- Press **FUNCTIONS**
- Confirm DIRECT NAVIGATOR with **ENTER**.
- In the TITLE VIEW menu, use **▼▲◀▶** to select the desired title.
- Press **SUB MENU**.
- In the sub menu, use **▼▲** to select [Chapter View] and confirm with **ENTER**.
- In the CHAPTER VIEW menu, use **▼▲◀▶** to select the desired title.
- Press **SUB MENU**, use **▼▲** to select the desired option in the sub menu and confirm with **ENTER**.

Erase Chapter RAM

- Confirm [Erase Chapter] with **ENTER**.
- Use **◀** to select [Erase] and confirm with **ENTER**.

*To edit several elements, use **▼▲◀▶** to select the desired title and press **PAUSE** .*

Create Chapter RAM

- Use **▼▲** to select [Create Chapter] and confirm with **ENTER**.
- Press **ENTER** where you want to create the chapter.
- Repeat this step to create more chapters.
- Use **▼** to select [Exit] and confirm with **ENTER**.

A short section of the recording right before the diving point may be lost.

Combine Chapters RAM

- Use **▼▲** to select [Combine chapters] and confirm with **ENTER**.
The selected chapter will be combined with the following chapter.
- Use **◀** to select [Combine] and confirm with **ENTER**.

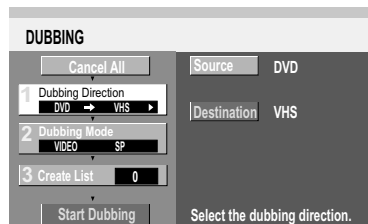
Title View: Return to TITLE VIEW.

FUNCTIONS Selection Menu

FUNCTIONS



DUBBING



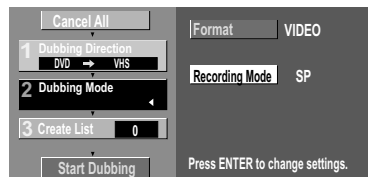
Copying from DVD **RAM RWR** to VHS

Copy-protected DVD-V cannot be copied.

- Press **FUNCTIONS**.
- Use **▼▲** to select [DUBBING] and confirm with **ENTER**.

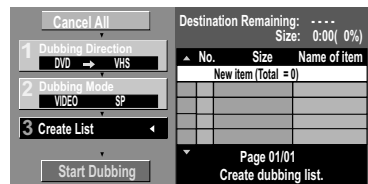
Cancel All: All created settings and copy lists will be deleted!

- Use **◀** to select [Yes] and confirm with **ENTER**.



Dubbing Direction

- Use **▶** to select [Source] and confirm with **ENTER**.
- Use **▼▲** to select DVD and confirm with **ENTER**.
The target drive is automatically detected.
- Use **◀** to return to [Dubbing Direction] and use **▼** to select [Dubbing Mode].



Dubbing Mode

- Use **▶** to select [Recording Mode] and confirm with **ENTER**.
- Use **▼▲** to select the desired Recording Mode and confirm with **ENTER**.
The format is detected automatically.
- Use **◀** to return to [Dubbing Mode] mode and use **▼** to select [Create List].



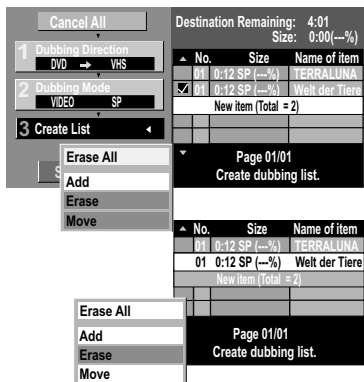
Create List

You can create a new Create List from the existing recordings and PLAYLISTS.

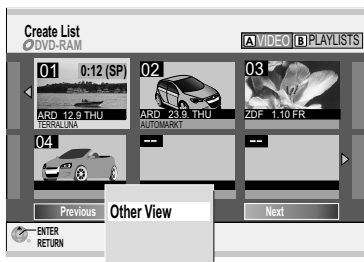
- Use **▶** to select [New item] and confirm with **ENTER**.
- In the Create List screen, use **▼▲◀▶** to select the desired title, and confirm with **ENTER**. The title is saved in the Create List.
- Use **◀** to return to [Create List] and use **▼** to select [Start Dubbing].
- Press **ENTER** to start the dubbing.
- Use **◀** to select [Yes] and confirm with **ENTER**.
- Press **RETURN** for 3 seconds to stop DUBBING early.

FUNCTIONS Selection Menu

FUNCTIONS



When copying from DVD to VHS, the index signal is automatically recorded for each title.



DUBBING

Editing items with the SUB MENU

You can delete all items from the copy list.

- Press **SUB MENU**.
- Confirm [Erase All] with **ENTER**.
- In the following screen use ◀ to select [Yes] and confirm with **ENTER**.

Editing individual elements

- Select the desired element and press **SUB MENU**.
- Use ▼▲ to select the desired option and confirm with **ENTER**.
Add: In Create List, use ▼▲▶ to select the desired title and confirm your selection with **ENTER**.
Erase: Use ◀ to select [Yes] and confirm with **ENTER**.
Move: Use ▼▲ to select a new position and confirm with **ENTER**.

To edit several elements, use ▼▲▶ to select the desired title and press **PAUSE** ■■.

- Use ◀ to return to [Create List] and select with ▼ [Start Dubbing].
- Press **ENTER** to start dubbing.

You can switch between VIDEO and PLAYLISTS to select your title.

Other View

- In the Create List screen, press **SUB MENU**.
- Confirm [Other View] with **ENTER**.
- In the following screen, confirm PLAYLISTS with **ENTER**.
The [B] PLAYLISTS view is displayed.
- To return to [A] VIDEO view, press **SUB MENU** again.
- Confirm [Other View] with **ENTER**.
- Confirm VIDEO with **ENTER**

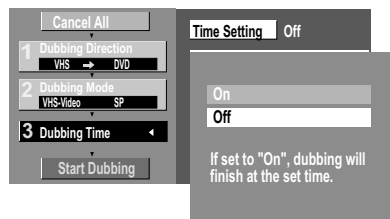


FUNCTIONS Selection Menu

FUNCTIONS



Cancel All: All created settings and copy lists will be deleted!



After DUBBING has started, all picture content, e.g. DVD-V menu messages are also recorded.



DUBBING

Copying from VHS to DVD   or finalised DVD  to VHS

Video cassettes can be copied to unfinalised discs.

- Press **FUNCTIONS**.
- Use **▼▲** to select [DUBBING] and confirm with **ENTER**.

Dubbing Direction

- Use **►** to select [Source] and confirm with **ENTER**.
- Use **▼▲** to select DVD or VHS and confirm with **ENTER**.
The target drive is automatically detected.
- Use **◀** to return to [Dubbing Direction] and use **▼** to select [Dubbing Mode].

Dubbing Mode

- Use **►** to select [Recording Mode] and confirm with **ENTER**.
- Use **▼▲** to select the desired Recording Mode [XP, SP, LP, EP or FR] and confirm with **ENTER**. The format is detected automatically.
- Use **◀** to return to [Dubbing Mode] and use **▼** to select [Dubbing Time].

Dubbing Time

- Use **►** to select [Time Setting] and confirm with **ENTER**.
- Use **▼▲** to select [On] and confirm with **ENTER**.
Recording Mode FR - Time Setting [Off]: DUBBING starts after rewinding to the beginning of the cassette. Titles for each index signal are automatically created.
Time Setting [On]: DUBBING starts at the desired start position. No titles are created.
- Use **▼▲** to select [Dubbing Time] and confirm with **ENTER**.
- Use **▼▲◀▶** to change the Time Setting and confirm with **ENTER**.
- Use **◀** to return to [Dubbing Time] and use **▼** to select [Start Dubbing].
- Press **ENTER** to start dubbing.
- Use **◀** to select [Yes] and confirm with **ENTER**.
The DUBBING ends with the selected time setting.
- Press **RETURN** for 3 seconds to stop DUBBING early.

FUNCTIONS Selection Menu

FUNCTIONS

To Others

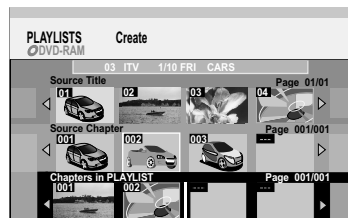
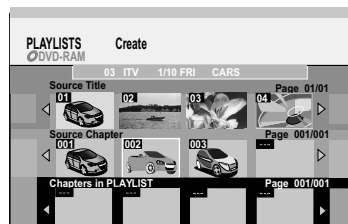
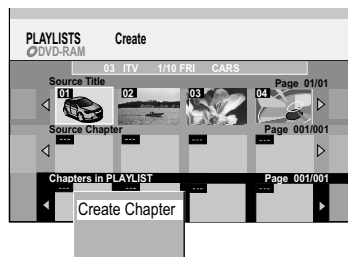
PLAYLISTS



You can create and then edit a playlist from your favourite chapters of your recording.

RAM Insert a recorded disc.

If write protection is activated, deactivate it.



Creating a Playlist

- Press **FUNCTIONS** in stop mode.
- Use **▼▲** to select [To Others] and confirm with **ENTER**.
- Confirm **PLAYLISTS** with **ENTER**.
- In **PLAYLIST VIEW**, use **▼▲◀▶** to select the free [Create] field and confirm with **ENTER**.

Create Source Chap.

- In the [Create] menu, use **◀▶** to select the Source Title and press **SUB MENU**.
- Confirm [Create Chapter] with **ENTER**.
- In the [Create Source Chap.] Menu, use **ENTER** to select the chapter sections.
*To place an exact chapter marking, use **PAUSE** to stop the playback. Use **SLOW/SEARCH** **◀◀**, **▶▶**, **SKIP** **◀◀**, **▶▶**, **TIME SLIP** or **◀▶** to select the position.*
- Use **▼** to select [Exit] and confirm with **ENTER**.

Adding Chapters to PLAYLISTS

- In the [Create] menu, use **◀▶** to select a Source Title and use **▼** to go to [Source Chapter].
- Use **◀▶** to select the Source Chapter that you want to add to the playlist and confirm with **ENTER**.
- Use **◀▶** to select the position where the chapter should be inserted into the **PLAYLISTS** and confirm with **ENTER**.
To add another chapter, repeat the steps. Use **▲** to select additional Source Titles.
- Use **RETURN** to go back to **PLAYLIST VIEW**.
*If you confirm a selected source title with **ENTER**, the entire title is saved into the **PLAYLISTS**.*

FUNCTIONS Selection Menu

FUNCTIONS



To Others



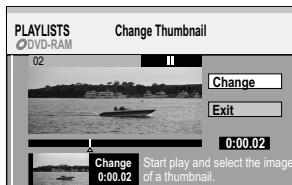
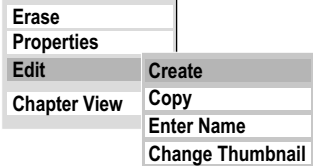
PLAYLISTS



Erase
Properties

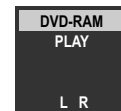


Chapter View



Select / Edit Playlists

- Press **FUNCTIONS**.
- Use **▼▲** to select [To Others] and confirm with **ENTER**.
- Confirm **PLAYLISTS** with **ENTER**.
- Use **▼▲◀▶** to select a playlist.
- You can play the playlist with **ENTER**.
- With **SUB MENU**, the sub-menu for editing the playlist appears.



Create

- Confirm [Create] with **ENTER**.
Please read Creating a Playlist.



Copy

- Use **▼▲** to select [Copy] and confirm with **ENTER**.
- In the following screen, use **◀** to select [Copy] and confirm with **ENTER**.
*To edit several elements, use **▼▲◀▶** to select the desired title and press **PAUSE** **||**.*

Enter Name

If you enter a long name, it is only partially displayed.



Change Thumbnail

You can select an image to be displayed as the preview in **TITLE VIEW**. The image will be displayed as the preview for approx. 1 second after the beginning of the title.

- Use **▼▲** to select [Change Thumbnail] and confirm with **ENTER**.
- In the Change Thumbnail menu, press **PLAY ▶** to start the playback.
- Press **ENTER** at the selected spot.
- Confirm [Exit] with **ENTER**.

The displayed preview is exchanged for this image.

FUNCTIONS Selection Menu

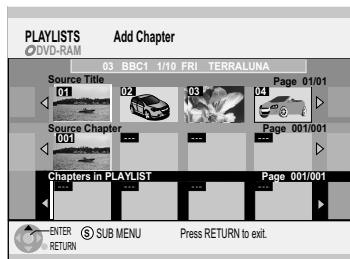
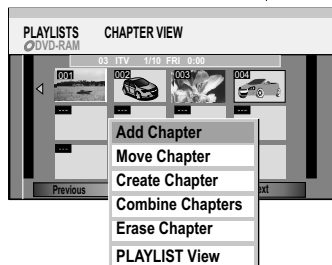
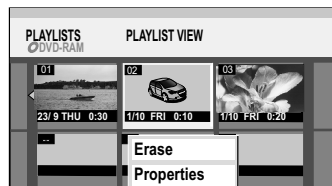
FUNCTIONS



To Others



PLAYLISTS



Edit Chapter

- Press **FUNCTIONS**.
- Use **▼▲** to select [To Others] and confirm with **ENTER**.
- Confirm PLAYLISTS with **ENTER**.
- In PLAYLIST VIEW, use **▼▲◀▶** to select a playlist.
- Press **SUB MENU**.
- Use **▼▲** to select [Chapter View] and confirm with **ENTER**.

- In CHAPTER VIEW, use **▼▲◀▶** to select the desired chapter and press **SUB MENU**.
- In the sub menu, use **▼▲** to select the desired option and confirm with **ENTER**.

Add Chapter

You can create a new chapter from the Source Title.

- In the [Add Chapter] menu, use **▼▲◀▶** to select a Source Title and press **▼**.
- Use **◀▶** to select a Source Chapter and confirm with **ENTER**. Use **▲** to cancel the process.
- Use **◀▶** to select the position where the chapter is to be inserted and confirm with **ENTER**.
- To add another chapter, repeat the steps. Use **▲** to select other Source Titles.
- Use **RETURN** to go back to CHAPTER VIEW.

FUNCTIONS Selection Menu

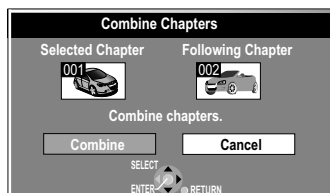
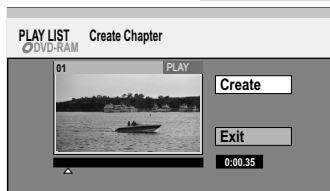
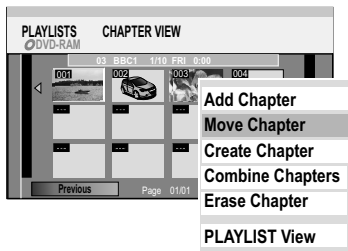
FUNCTIONS



To Others



PLAYLISTS



Edit Chapter

- In CHAPTER VIEW, use **▼▲◀▶** to select the desired chapter and press **SUB MENU**.
- In the sub menu, use **▼▲** to select the desired option and confirm with **ENTER**.

Move Chapter

- Use **▼▲◀▶** to select the position where the chapter is to moved, and confirm with **ENTER**.

Create Chapter

- Press **ENTER** at the position where you want to create the chapter. Repeat this step to create a chapter at another spot.
- Use **▼** to select [Exit] and confirm with **ENTER**.
A short section of the recording right before the dividing point can be lost.

For quick editing

*Use **PAUSE** **■** and **SKIP** **◀◀**, **▶▶** to jump to the start or end of a title. Find the start and end points with **SLOW/SEARCH** **◀◀**, **▶▶** or **TIME SLIP**.*

Combine Chapters

- In the next screen, use **◀** to select [Combine] and confirm with **ENTER**. The selected chapter is combined with the next chapter.

Erase Chapter

- In the next screen, use **◀** to select [Erase] and confirm with **ENTER**. The original title is not erased by erasing the chapter.

*To edit several elements, use **▼▲◀▶** to select the desired title and press **PAUSE** **■**.*

PLAYLIST View: Return to PLAYLIST VIEW.

FUNCTIONS Selection Menu

FUNCTIONS



To Others



SETUP



- Press **FUNCTIONS** in stop mode.
- Use **▼▲** to select [To Others] and confirm with **ENTER**.
- Use **▲▼** to select SETUP and confirm with **ENTER**.
- Use **▲▼** to select the desired sub menu and use **▶** to switch to setting.
- Use **▲▼** to select the desired setting and confirm with **ENTER**.
- Use **▲▼** to select the desired option and confirm with **ENTER**.

Follow the menu navigation. The unit saves your settings.

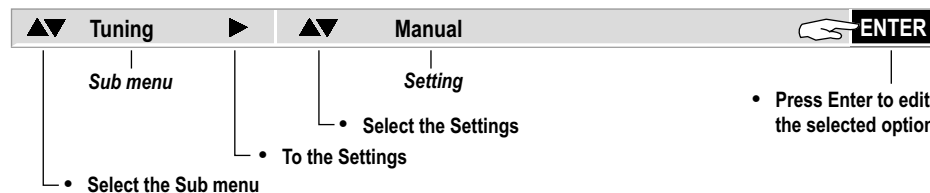
Use **◀** to return to the sub menu and use **RETURN** to exit the menu.

Use **FUNCTIONS** to return to the FUNCTIONS menu.

Sub menu	Setting	Option
SETUP	Remote Control	MODE 1
	Clock	
	Owner ID	
Tuning	Quick Start	On
Disc	Shipping Condition	
Picture	Default Settings	
Sound		
Display		
Connection		
Others		



Menu navigation in the SETUP menu



FUNCTIONS Selection Menu

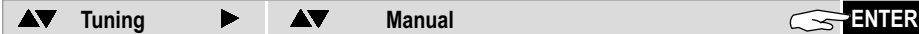
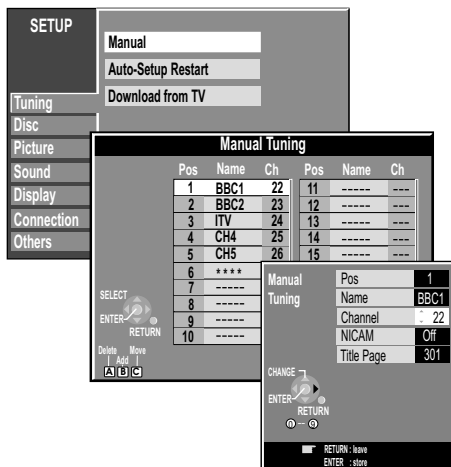
FUNCTIONS



To Others



SETUP



Entering a New Television Station

- Use **◀▶** to select an empty station position and confirm **ENTER**.
- Enter the channel using **▲▼** or **⊕ - ⊖**.
- The channel tuning starts. Wait until the desired station is set and confirm the settings with **ENTER**.

Image interference may be minimised with Fine Tuning.

Options available for tuning the channels. Not every model supports all of the functions.

Pos		Station position.
Name		Station name setting.
Channel		Channel setting.
NICAM	Auto / Off	Automatic NICAM detection / Mono
Title Page		The station title is obtained from the TV guide.

FUNCTIONS Selection Menu

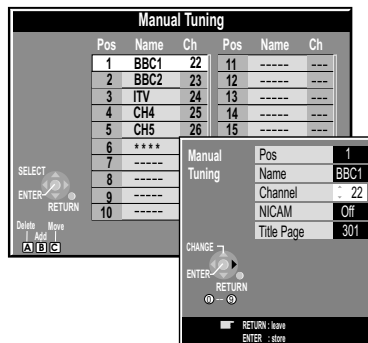
FUNCTIONS



To Others



SETUP



▲▼ Tuning ▶

▲▼ Manual

ENTER

Changing the Name of the Television Station

- Use ▼▲▶ to select the name of the television station and confirm with **ENTER**.
- Use ▼▲ to select [Name] and use ▶ to select the name field.
The cursor jumps to the first letter **B**BC1.
- Change the letter using ▲▼.
- Use ▶ to select the next letter B**B**C1.
- Press **ENTER**. The new name is saved in the station table.

Deleting Television Stations

- Use ▼▲▶ to select the station that you want to delete.
- Press **A** to delete the station.
The settings of the programme position are deleted.

Inserting an Empty Programme Position

(If the station table was not created using Q-Link or similar functions)

- Use ▼▲▶ to select the programme position in front of which an empty programme position is to be inserted.
- Press **B**. An empty programme position is inserted.

Moving Television Stations

(If the station table was not created using Q-Link or similar functions)

- Use ▼▲▶ to select the station that you want to move.
- Press **C**.
- Use ▼▲ to select a new position and confirm with **ENTER**.

FUNCTIONS Selection Menu

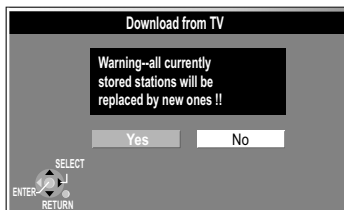
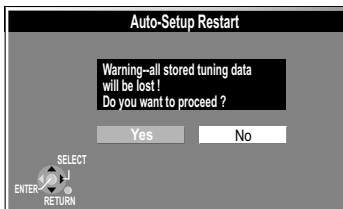
FUNCTIONS



To Others



SETUP



▲▼ Tuning ▶



Auto-Setup Restart



ENTER

Auto-Setup Restart

- Use ◀ to select [Yes] and confirm with **ENTER**. The station search begins.
- To cancel the process, use ▶ to select [No] and confirm with **ENTER** or press **RETURN**.
- To stop the station search early, press **RETURN**.

▲▼ Tuning ▶



Download from TV



ENTER

Download from TV (with Q-Link or similar functions)

- Use ◀ to select [Yes] and confirm with **ENTER**. The data transfer begins.
- To cancel the process, use ▶ to select [No] and confirm with **ENTER** or press **RETURN**.
- To stop the data transfer early, press **RETURN**.

FUNCTIONS Selection Menu

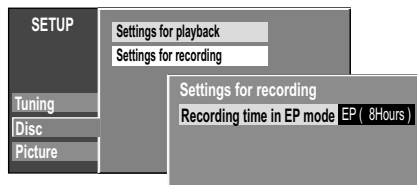
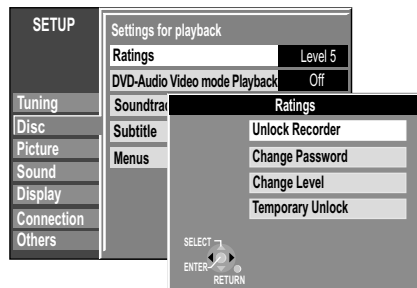
FUNCTIONS



To Others



SETUP



 Disc 		 Setting 		 ENTER	 Option 	 ENTER
Ratings You can restrict the playback of DVD-Video by entering a password. 8 Allows all titles. 1-7 Stops playback of DVD-Video with registered security levels. 0 Locks all titles.			Changing the Security Level [Unlock Recorder] Return to level 8 [Change Password] Change the password [Change Level] Change the unlock level [Temporary Unlock] You can temporarily unlock a disc for playback. The unit is locked again when you switch to standby or open the disc tray.			
DVD-Audio Video mode Playback		[On] [Off] On: You want to play the DVD-Video content of an audio DVD. If you change discs or turn the unit off, the setting is reset to [Off].				
Soundtrack		DVDPLAY Select the language for Soundtrack, Subtitle and Menus. Under [Other], enter the country code for a different language.				
Subtitle						
Menus						
Recording time in EP mode		[EP (6Hours)] [EP (8Hours)] Select the maximum number of hours for recording in EP mode. EP (6Hours): Recording time on a 4.7-GB disc. EP (8Hours): Recording time on a 4.7-GB disc. The sound quality is lower.				

FUNCTIONS Selection Menu

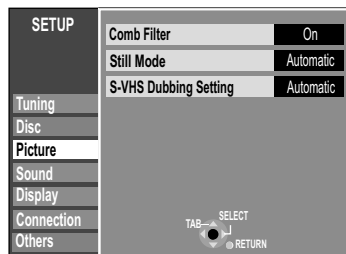
FUNCTIONS



To Others



SETUP



Picture	Setting	Option
Comb Filter	[ON] [Off] On: The picture becomes clear and contour-rich. This setting is always set to [On] if you have selected [TV System - NTSC]. Off: If the picture to be recorded is grainy.	
Still Mode	[Automatic] [Field] [Frame] Select the display of the still image. Field: Select this function, if the picture is disturbed with the [Automatic] setting. Frame: Select this function if small text or line structures are not displayed clearly with the [Automatic] setting. <i>Frames are still images that together form a moving picture. A full frame is made up of 2 half frames. The picture can appear blurry but the overall quality is good.</i> <i>A half frame only contains half of the information of a full frame and has a poorer picture quality.</i>	
S-VHS Dubbing Setting	[Automatic] [SQPB] If you are dubbing a video tape to DVD that was recorded in S-VHS or in S-VHS ET format, select [Automatic] or [SQPB]. Automatic: Plays and dubs the tape in S-VHS quality. You can dub over the tape with its original resolution. SQPB: Plays and dubs the tape in VHS quality. You cannot attain the original resolution from S-VHS.	

FUNCTIONS Selection Menu

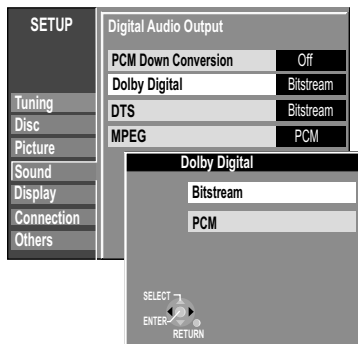
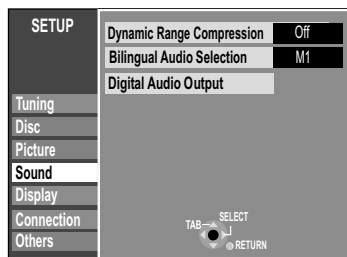
FUNCTIONS



To Others



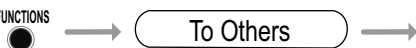
SETUP



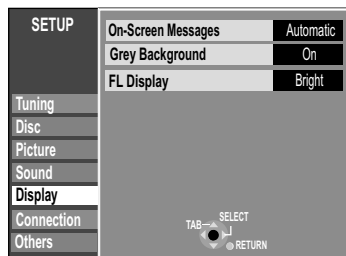
▲▼ Sound ▶ ▲▼ Setting ▶ ENTER ▼▲ Option ▶ ENTER						
Dynamic Range Compression DVD-V <i>(only Dolby Digital)</i>	[ON] [Off] On: The level of quiet sections is increased and the level of loud sections is decreased. The sound is still clearly audible when the volume is decreased.					
Bilingual Audio Selection ◀R ▶RWV▶ ▶R	[M 1] [M 2] If you want to record programmes on Discs that were broadcast in dual channel tone, you can choose between the original language [M 1] or another available language [M 2]. If you are copying from an external source or a tape position to Discs, select the sound track on the other unit.					
Digital Audio Output	<table border="1"> <tr> <td>PCM Down Conversion</td><td rowspan="4">Select the appropriate setting if an external unit is connected to the DIGITAL AUDIO OUT of the DVD recorder.</td></tr> <tr> <td>Dolby Digital</td></tr> <tr> <td>DTS</td></tr> <tr> <td>MPEG</td></tr> </table>	PCM Down Conversion	Select the appropriate setting if an external unit is connected to the DIGITAL AUDIO OUT of the DVD recorder.	Dolby Digital	DTS	MPEG
PCM Down Conversion	Select the appropriate setting if an external unit is connected to the DIGITAL AUDIO OUT of the DVD recorder.					
Dolby Digital						
DTS						
MPEG						
PCM Down Conversion	[ON] [Off] Select the audio output mode at a scanning frequency of 96 kHz or 88.2 kHz. Despite this setting, signals are converted to 48 kHz or 44.1 kHz if they have a scanning frequency of more than 96 kHz or 88.2 kHz or a disc is copy-protected. ON: The connected unit cannot process signals with a scan frequency of 96 kHz or 88.2 kHz. Signals are converted to 48 kHz or 44.1 kHz. Off: The connected unit can process signals with a scan frequency of 96 kHz or 88.2 kHz. Signals are output as 96 kHz or 88.2 kHz.					
Dolby Digital DTS MPEG	[Bitstream] [PCM] Bitstream: The connected unit can decode the corresponding signal. PCM: If the connected unit cannot decode the corresponding signal, the setting must be switched to [PCM]. Otherwise, strong noise can cause damage to hearing or loudspeakers. Perform settings based on your audio system.					

FUNCTIONS Selection Menu

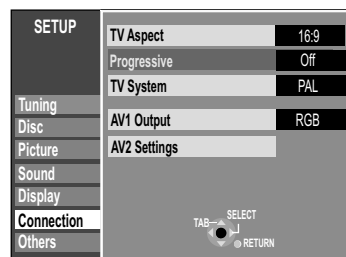
FUNCTIONS



SETUP



Display	Setting	Option
On-Screen Messages	[Automatic] [Off] Automatic: The screen messages are displayed on the screen.	
Grey Background	[ON] [Off] On: The grey background is displayed when there is no television reception.	
FL Display	[Bright] [Dim] Changes the brightness of the unit display.	



Connection	Setting	Option
TV Aspect	[16:9] [4:3] [Letterbox] Select the TV picture format of your television set. <i>Letterbox: Black strips appear at the top and bottom of your screen.</i>	
Progressive	[ON] [Off] Only COMPONENT VIDEO OUT. On: In COMPONENT VIDEO OUT mode, the signal is displayed in full picture quality.	
TV System	[PAL] [NTSC] PAL: You connect the unit to a PAL or multi-system television set. Programmes that were recorded with NTSC are played back as PAL60. NTSC: You connect the unit to an NTSC television set. Programmes that were recorded with NTSC are played back as NTSC.	
AV1 Output	[Video (with component)] [RGB (without component)] Switch to RGB for an improved picture quality. If RGB is set, no signal is available at COMPONENT VIDEO OUT. RGB is not available for VHS playback.	

FUNCTIONS Selection Menu

FUNCTIONS



To Others



SETUP

DVD/VHS

DVD



▼▲ Connection ►

SETUP	TV Aspect	16:9
	Progressive	Off
	TV System	PAL
	AV1 Output	RGB
	AV2 Settings	
	TAB SELECT RETURN	

SETUP	AV2 Settings	
	AV2 Input	RGB/Video
	Ext Link	Ext Link 1
	SELECT ENTER RETURN	

▲▼ AV2 Settings		ENTER	▼▲ AV2 Settings	ENTER	▼▲ Option	ENTER
AV2 Settings 	AV2 Input	Perform the settings in the following sub menus for the connected device.				
	Ext Link					
AV2 Input	[RGB / Video] [RGB] [Video] [S Video] RGB / Video: Is detected automatically. RGB, Video, S Video: Input is switched to the selected signal.					
Ext Link	[Ext Link 1] [Ext Link 2] Ext Link 1: For digital receivers that send a special recording control signal, e.g. the F.U.N. receiver (TU-DSF41). Ext Link 2: External recording control for satellites or digital receivers (video signal).					

FUNCTIONS Selection Menu

FUNCTIONS

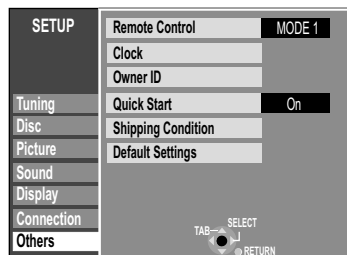


To Others



SETUP

DVD/VHS



Others	Setting	Option
Remote Control	[MODE 1] [MODE 2] [MODE 3] Change the code of the remote control so that you can also use another Panasonic DVD unit at the same time.	11
Clock		79
Owner ID		79
Quick Start	[ON] [Off] On: The device is ready for use from standby mode after approx. 2 seconds. Standby mode uses more power.	
Shipping Condition	All settings except for the security levels with associated password and the time settings are reset to their factory settings.	
Default Settings	All settings except for the programmed channels, time, country, language and disc-language settings, the security levels including password and the remote-control code are reset to the factory settings.	

FUNCTIONS Selection Menu



FUNCTIONS

To Others

SETUP



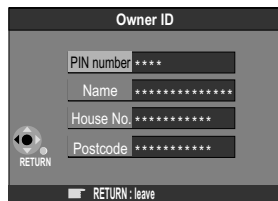
If Clock setting is set to AUTO, do not set it to MANUAL, otherwise, the automatic time correction function is deactivated.

This DVD Recorder uses a 24 hour clock.

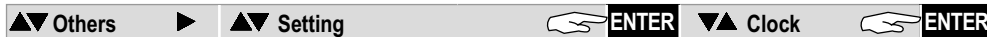
In case of a power failure, an automatic back-up system maintains the clock for approximate 60 minutes.

When Clock setting is set to AUTO, the automatic time correction function checks and if necessary adjusts the time several times every day. The automatic time correction function only works when the DVD Recorder is in standby, it does not work in the timer recording mode.

Don't forget to change summer time and winter time.



Make sure that you will remember the PIN number (make a note of it).



Clock setting

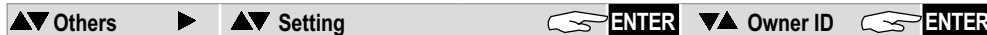
The clock will normally be set correctly during Auto-Setup however, in some circumstances the DVD Recorder cannot set the clock automatically. In this case, follow the operation steps below to manually set the clock.

- Use **▲** to switch automatic mode to [Off] and confirm with **ENTER**.
- Use **▲▼** and **▶** to change Time and Date.
- Confirm the change with **ENTER**.

To activate the automatic time correction function

The correct time for the DVD Recorder clock can be automatically maintained when the DVD Recorder is tuned to a station that transmits a time signal.

- Use **▲** to switch automatic mode to [On] and confirm with **ENTER**.
The automatic setting of the clock begins.
- Under adverse reception conditions, etc., the Automatic time correction function may not work. In this case, the indication for Clock setting is automatically reset to MANUAL. If the reception conditions improve later on, it is possible to activate this function.



Owner ID

- Use **▶** and press the Numeric buttons or **▲▼▶** to enter a four-digit PIN number.
- Press **◀** to correct the digit.
- Press the **ENTER** button twice to confirm.
- Enter the [Name], [House No] and [Postcode] in the same way, using **▲▼◀▶**.
- Press the **ENTER** button to confirm each entry.
- Press the **RETURN** button to leave the Owner ID screen.

To display the Owner ID information on TV

- On the unit press DVD **STOP** **■** for more than 5 seconds.
The PIN number is not displayed.
After 30 seconds, this menu automatically disappears.

FUNCTIONS Selection Menu

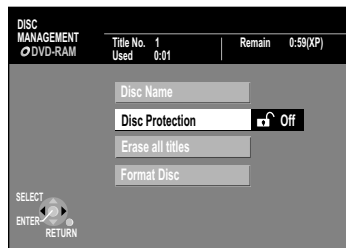
FUNCTIONS



To Others



DISC MANAGEMENT

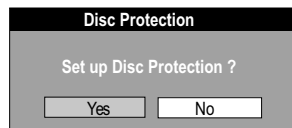


- Press **FUNCTIONS** in stop mode.
- Use **▼▲** to select [To Others] and confirm with **ENTER**.
- Use **▼▲** to select DISC MANAGEMENT and confirm with **ENTER**.
- Use **▲▼** to select the desired menu and confirm with **ENTER**.
- Use **FUNCTIONS** to return to the FUNCTIONS menu.

Disc Name **RAM** **-R -RW** **+R**

55

- Enter the name. The name is displayed in the FUNCTIONS window.
You cannot give a name to a Disc after it has been finalised.



Disc Protection **RAM**

This procedure allows you to activate or deactivate write protection.

- Use **◀** to select [Yes] and confirm with **ENTER**.
Write Protection On: The padlock is closed.
- To deactivate write protection, use **◀** to select [Yes] and confirm with **ENTER**.
Write Protection Off: The padlock is open.



Erase all titles **RAM**

- Confirm [Erase all titles] with **ENTER**.
- In the following screen, use **◀** to select [Yes] and confirm with **ENTER**.
In the confirmation message, use **◀** to select [Start] and confirm with **ENTER**.
All titles and PLAYLISTS will be erased and cannot be restored.
Protected discs or titles cannot be erased.

FUNCTIONS Selection Menu

FUNCTIONS



To Others



DISC MANAGEMENT



DISC MANAGEMENT
DVD-RAM

Title No. 1
Used 0:01

Remain 0:59(XP)

Disc Name

Disc Protection Off

Erase all titles

Format Disc

SELECT
ENTER RETURN

Format Disc

Formatting will erase all contents.
This will take approximately 1 minute.
Start formatting ?

Yes
No

Format Disc

All contents will be erased even if protected.
Start formatting ?

Start
Cancel

RAM If write protection is activated, deactivate it.

- Press **FUNCTIONS** in stop mode.
- Use **▼▲** to select [To Others] and confirm with **ENTER**.
- Use **▼▲** to select DISC MANAGEMENT and confirm with **ENTER**.
- Use **▲▼** to select the desired menu and confirm with **ENTER**.
- Use **FUNCTIONS** to return to the FUNCTIONS menu.

Format Disc **RAM** **-RWV** **-RWVR**

Some Discs are not formatted. Before you can use them in this unit, they must be formatted. The formatting erases all data on the disc.

- Use **◀** to select [Yes] and confirm with **ENTER**.
- Use **◀** to select [Start] and confirm with **ENTER**.

The formatting process begins. After it is complete, a message is displayed.

- Press **ENTER**.
- Press **RETURN** to stop the formatting process.

If the formatting process takes more than 2 minutes, an error may have occurred. The formatting can be cancelled and restarted.

Do not unplug the unit while the disc is being formatted.

During formatting, all data is erased, including recordings created with this unit.

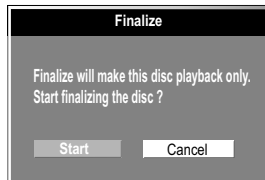
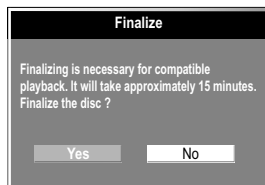
DVD-R/+R and CD-R/RW cannot be formatted.

FUNCTIONS Selection Menu

FUNCTIONS

To Others

DISC MANAGEMENT



- Press **FUNCTIONS**.
- Use **▼▲** to select [To Others] and confirm with **ENTER**.
- Use **▼▲** to select DISC MANAGEMENT and confirm with **ENTER**.
- Use **▲▼** to select the desired menu and confirm with **ENTER**.
- Use **FUNCTIONS** to return to the FUNCTIONS menu.

Auto-Play Select **-R -RW(V) +R**

Before finalisation, you must select the start menu to be shown at the beginning of the DVD-V.

- Use **▼▲** to select [Top Menu] or [Title 1] and confirm with **ENTER**.
If [Top Menu] is selected, the disc menu appears first.
If [Title 1] is selected, the playback begins at the beginning of the disc.

Finalize **-R -RW(V) +R**

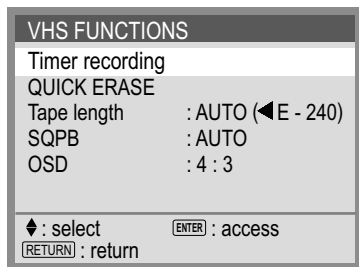
Through finalization, DVD-R become DVD-Videos compatible with DVD-Video format. You can play these finalized DVD-R on compatible DVD players.

- Use **◀** to select [Yes] and confirm with **ENTER**.
- Use **◀** to select [Start] and confirm with **ENTER**.
 The finalisation process begins and takes approx. 15 minutes.
 When this process is finished, a confirmation message appears.
- Press **ENTER**.

Do not unplug the unit while the disc is being finalized. You can only finalize DVD-R that were recorded on this unit. You can no longer record to already finalized DVD-R. A finalised DVD-RW can be recorded again after reformatting.

	Before Finalization	After Finalization
Disc display on this device	DVD-R / -RW / +R	DVD-V
Record/edit/enter names	Possible	—
Play on other playback units	—	Possible

VHS FUNCTIONS



Changing the Settings

- Press **FUNCTIONS** in stop mode.
- Use **▲▼** to select the desired entry.
- Use **◀▶** to change the setting.
- Press **RETURN** to exit the menu.

Settings in the VHS FUNCTIONS Menu

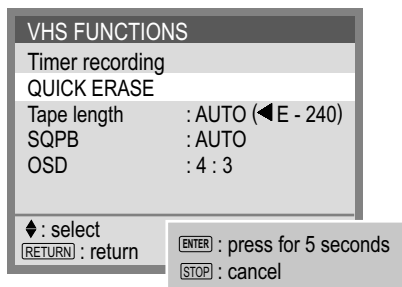
Timer recording	Timer-controlled recording
QUICK ERASE	Erase all recordings on a played tape.
Tape length	Setting the tape length of the used cassette. AUTO (◀E - 240), E - 195, E - 260, E - 300
SQPB	AUTO : The unit automatically detects the recording type. ON : Playback of an S-VHS cassette in Quasi-S-VHS format. OFF : For playback of recordings in VHS format.
OSD	4:3 : Information appears on the edge of the screen (in 16:9 format, the messages are not visible). WIDE : Information appears on the edge of the screen (in 4:3 format, the messages appear in the middle). OFF : No information is displayed

FUNCTIONS

● QUICK ERASE

In order to be able to record on a used cassette tape without any quality problems, erase the recordings on the cassette using the QUICK ERASE function.

- Insert the cassette containing the content that you want to erase.
- Press **FUNCTIONS** in stop mode.
- Use **▲▼** to select QUICK ERASE and confirm with **ENTER**.
- Press **ENTER** for 5 seconds to start the QUICK ERASE function.
The erase procedure takes about 30 minutes for an E-180 cassette. Once the end of the cassette has been reached, the unit automatically rewinds the tape.
- Press **STOP ■** to cancel the procedure.



STATUS displays



When using the unit, information on the settings of the unit and the operating procedure appear on the television screen.

STATUS

Displaying the information

- Press **STATUS**.

Each time the button is pressed, the display switches from: time - tape counter - tape remaining - tape. During the index search, [01] through [20] is displayed, during JET Rewind [JET REW].

VHS

These displays do not appear in PAUSE mode or during slow-motion playback.

REMAIN: 0:24	Tape remaining	The remaining time on the tape depends on the correct setting of the tape length
11:25:02	Time	
□ 0:32.51	Tape counter	Use * CANCEL/RESET to set the counter to 0:00.00. The tape counter is automatically set to 0:00.00 when a video cassette is inserted.
▷ 0:21.29	Playback	
● 0:32.51	Recording	
◀◀ 0:32.51	Rewind	Rewind
▶▶ 1:15.01	Forward	Fast forward

AUDIO

Changing the soundtrack

- Press **AUDIO** to change the soundtrack. Each time the button is pressed, the display switches from: L R (stereo), L -, - R, -- (normal soundtrack), L R (stereo)

L R SP	Soundtrack	If you use the DC channel, you cannot change the soundtrack.
---------------	-------------------	--

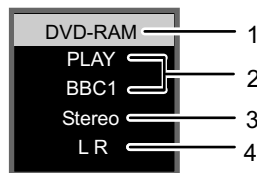
STATUS displays



STATUS

Displaying the information

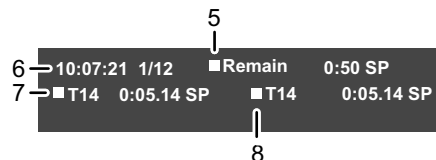
- Press **STATUS**.
- Press **STATUS** again. The display changes each time that the button is pressed.
- To exit the display, press **STATUS**.



- 1: Current medium
- 2: Current recording and playback state, input channel

REC	Record		Pause playback
PAUSE	Pause recording	▶▶	Fast forward (5 speeds)
PLAY	Playback	◀◀	Rewind (5 speeds)
PLAYx1.3	Quick View (Playback x1.3)	▶▶ ◀◀	Slow motion Slow-motion rewind (5 speeds)

- 3: Sound type: Stereo: A stereo broadcast is currently being received
M1/M2: A 2 channel broadcast is currently being received
M1: A mono NICAM broadcast is currently being received
- 4: Sound mode: LR,L,R: Soundtrack was changed with the **AUDIO** button.



- 5: Available recording time and recording mode: e.g. 0:50 SP shows 50 minutes in SP mode.
- 6: Current date and time
- 7: Title number: Also shows the recording mode and the current playback time of the title.
- 8: Title number: Also shows the recording mode and the current recording time of the title.

The status information changes depending on the function, e.g. PLAY, REC or REC PLAY.

DISPLAY menus



DISPLAY menus contain information about the disc or the unit.

With DVD-Video you can use the repeat function, change subtitles and Angles, with DVD playback, you can change the picture and sound setting.

Depending on the status of the unit (playback, stop), there are some entries that cannot be selected or changed. Subtitles, soundtrack and recording angle can only be selected if they were recorded on the disc. With some discs, these can only be changed via the disc menus.

When playing recordings of bilingual programmes, "1+1 ch" is displayed.

- Press **DISPLAY** to launch the menu
- Press **DISPLAY** again to exit the menu.

DISPLAY	▼▲ Disc	▼▲ Option	▼▲ Setting
Disc	Soundtrack 2 ENG DD Digital 2/0ch		
Play	Subtitle Off		
Picture	Audio channel --		
Sound			
Other			

Soundtrack	Soundtrack lang.	Change the language by changing the soundtrack.
	DVD-A DVD-V	
Subtitle	Sound properties	LPCM/PPCm/Dolby Digital, DTS and MPEG signal type
	RAM -R -RW(V) +R -RW(VR)	k (kHz): scan frequency, b (bit): number of bits ch (channel): number of channels
Angle	Subtitle language	Change the subtitle language.
	DVD-A DVD-V	
STILL-P	Subtitles [On] [Off]	Switch subtitles on or off.
	RAM -R -RW(V) +R -RW(VR)	
Audio channel	Angle	Select another recording angle.
	DVD-A DVD-V	
PBC	Still picture number	Return to standard page: Select [Return] and press ENTER.
	DVD-A	
	Slide Show	Display only
	Audio channel	Select the audio channel L+R / L / R
	PBC	VCD
		PBC displays whether the menu playback control is switched on or off.

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

DISPLAY menus



DISPLAY		▼▲ Play	▼▲ Option	▼▲ Setting
Disc	Repeat Play	Off	Repeat Play	[On] [Off] This function is only available when the elapsed playtime is displayed. During the playback of playback list RAM -R -RW(V) +R -RW(V) DVD-V ▶ Title ↔ Chapter ↔ Off ◀ VCD CD ▶ Track ↔ All ↔ Off ◀ DVD-A MP3 ▶ Track ↔ Group ↔ Off ◀ RAM ▶ PL (PLAYLISTS) ↔ Off ◀ If the video CD has playback control Select a track using the number buttons in stop mode.

DISPLAY		▼▲ Picture	▼▲ Option	▼▲ Setting
Disc	Playback NR	Off	Playback NR	[On] [Off] Reduces noise and image distortion.
Play	Progressive	On	Progressive	[On] [Off] Select [On] to activate full picture output.
Picture	Transfer	Auto	Transfer	For [Progressive - On], select the appropriate conversion method for full picture output.
Sound			PAL output signal	[Auto] [Video] Select Video if the Auto setting disrupts the video content.
Other			NTSC output signal	[Auto1] [Auto2] [Video] Select Video if Auto1 or Auto2 settings disrupt the video content.

DISPLAY		▼▲ Sound	▼▲ Option	▼▲ Setting
Disc	V.S.S.	Off	V.S.S.	[Natural] [Emphasis] [Off] RAM -R -RW(V) +R -RW(V) DVD-V DVD-A Surround sound effect with 2 front loudspeakers. Only with Dolby Digital with 2 or more channels. Switch V.S.S. off if this leads to disturbances. V.S.S. does not work when recording two-channel sound.
Play	Dialog Enhancer		Dialog Enhancer	[On] [Off] RAM -RW(V) +R -RW(V) DVD-V DVD-A Dolby Digital, only with 3 or more channels, including a center channel. The volume is increased so that dialogs are easier to understand.

DISPLAY		▼▲ Other	▼▲ Option	▼▲ Setting
Other	Position	1	Position	[1 - 5] Position of the OSD displays on the screen

Before requesting service



FUNCTION No function possible.	▶ Check the power supply connection.
The unit is switched on but cannot be used. The error code «H□□», «U□□» or «F□□» appears:	▶ There is a malfunction. The numbers following the letter «H» indicate the condition of the unit. • Switch the unit to standby 0/I. If the unit does not switch to standby mode, press and hold 0/I for approx. 10 seconds or unplug it from the power supply for approx. one minute and reconnect the cable. • Press 0/I to switch the unit on. If the malfunction is not eliminated after this, contact customer service and provide the code that is displayed.
The unit automatically switches to standby mode.	▶ One of the unit's security devices may have been activated. Press 0/I to switch the unit on.
PICTURE No picture.	▶ Check the connection to the television set, e.g. AV1.  13
Television reception worsens when the unit is connected.	▶ Check the aerial connection. You may need to use a signal amplifier.
The picture is not set correctly.	▶ Check the [TV Aspect] setting in the Connection SETUP menu.  76
The picture flickers.	▶ Adjust the picture. Read the operating instructions for the television.
No on-screen messages.	▶ Change the [On-Screen Messages] setting in the Display SETUP menu.  76
SOUND No sound/ Volume set to quiet/ Distorted sound.	▶ Check the connections. ▶ If you have connected an amplifier, check its input mode. ▶ Switch off the V.S.S. function if it causes problems.  87
It is not possible to hear the desired sound type.	▶ Press AUDIO to select the desired sound type. ▶ Change the appropriate setting in the Sound SETUP menu.  75
The sound cannot be set for stereo or NICAM broadcasts.	▶ Connect external devices with audio cables even if you use a digital connection. ▶ You cannot change the sound type when using DVD-R/-RW(V)/+R.  23

Before requesting service



DISPLAY The display lighting is weak.	▶ Change the [FL Display] in the Display SETUP menu. 76
"0:00" blinks on the unit display.	▶ No time. Set the time in the Others, [Clock] SETUP menu. 79
REMOTE CONTROL No functions	▶ If the unit is in standby mode (⊙ on the unit) end this with TIMER . ▶ A wrong remote control code was selected. 11 ▶ Check the batteries. Point the remote control at sensor on the unit. 10 ▶ The child protection feature has been activated.
The television cannot be operated.	▶ A wrong remote control code was selected. 10
PLAYBACK Playback does not start.	▶ The disc is dirty or badly scratched. ▶ You inserted a disc that is not suitable for playback. ▶ You inserted a blank disc.
DVD-Video will not play.	▶ Some DVD-Videos cannot be played if the security level has been changed. 73
No reaction when the button is pressed.	▶ ⊙ appears on the screen. The procedure is stopped by the unit or the disc. ▶ The child protection feature has been activated. 10
A title or chapter is not played back after being selected.	▶ Some titles and chapter of DVD-Video are not played back if the Ratings have changed. 73
Alternative soundtracks and subtitles cannot be selected.	▶ The languages were not recorded on the disc. ▶ You may need to use the disc menu to select the languages.
The soundtrack/subtitle language does not match the language selected in the SETUP menu.	▶ The language is not recorded on the disc.
No subtitles.	▶ The subtitles are not recorded on the disc or are not switched on. 73, 86
The perspective cannot be changed.	▶ The angle perspective can only be changed for scenes that were recorded in different angles.
You forgot your classification password.	• With the unit disc tray open, press and hold REC and PLAY/ x1.3 simultaneously for at least 5 seconds.

Before requesting service



RECORDING Cannot record	› Check whether the inserted disc is suitable for recording. › The disc is not formatted. Format the disc (RAM/DVD-RW). › The write-protection device on the Cartridge is set to "PROTECT". Deactivate the write protection. › If you activated the write protection, deactivate it in the DISC MANAGEMENT menu. › The material that you want to record is copy-protected. 81 29 80
Part or all recorded programmes were lost.	› If the power goes out during recording or editing or the power plug is disconnected from the power socket, the programme can be lost or the disc can be damaged.
TIMER-controlled recording is not working.	› The TIMER programming is incorrect or different TIMER-programmes are overlapping each other. Correct the programming. › The unit is in standby mode for TIMER-controlled recording. Press TIMER. › Check the clock setting. 4446
The TIMER-controlled recording cannot be cancelled.	› Press TIMER during the TIMER-controlled recording. › In the case of a TIMER-controlled recording via an external device, press DVD or VHS and then EXT LINK. EXT L disappears. 50
Video cassette cannot be copied to disc.	› When recording video cassettes to disc, the TP channel was not selected. › Video cassette is copy-protected. 53
Copying from disc to video cassette does not work.	› When recording from disc to video cassette, the DC channel was not selected. › DVD is copy-protected. 53
EXTERNAL INPUT Video or audio from external device is not recorded.	› The external device is not connected correctly. › The correct external input channel AV2 or AV3 was not selected. 23

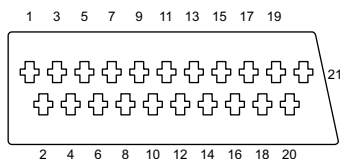
Country codes

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

21-pin Scart Socket

The 21-pin Scart socket transmits both input and output signals for picture and sound. TVs equipped with the same type of socket can be connected here. This type of socket is also called Peritel, Euro Connector and Euro AV.

21-pin Scart Socket



AV1 Scart Socket (NORMAL)

- 1 Audio output CH2 (R)
- 2 Audio input CH2 (R)
- 3 Audio output CH1 (L)
- 4 Audio ground
- 5 Blue ground
- 6 Audio input CH1 (L)
- 7 Blue
- 8 Switching voltage
- 9 Green ground
- 10 Reserved
- 11 Green
- 12 No connection
- 13 Red ground
- 14 Blanking ground
- 15 Red
- 16 Blanking
- 17 Video output ground
- 18 Video input ground
- 19 Video output
- 20 Video input
- 21 Ground

AV2 Scart Socket

- 1 Audio output CH2 (R)
- 2 Audio input CH2 (R)
- 3 Audio output CH1 (L)
- 4 Audio ground
- 5 Blue ground
- 6 Audio input CH1 (L)
- 7 Blue
- 8 Switching voltage
- 9 Green ground
- 10 Control signal
- 11 Green
- 12 Reserved
- 13 Red ground
- 14 Blanking ground
- 15 Red
- 16 Blanking
- 17 Video output ground
- 18 Video input ground
- 19 Video output
- 20 Video input
- 21 Ground

Informations

This DVD Recorder is a precision unit. Handle it carefully and do not expose it to vibrations during recording. Otherwise there may be breaks or noises in the recordings.

The manufacturer accepts no responsibility and offers no compensation for loss of recorded or edited material nor for consequential damages attributed to a defect in the unit or the disc.

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

Dolby Digital

Method of encoding digital signals. The signals are very much compressed in the process to enable recordings of large volumes of data. Manufactured under license from Dolby Laboratories. Dolby, Pro Logic and the double-D symbol are trademarks of Dolby Laboratories.

DTS (Digital Theater Systems)

Sound system used in cinemas or movie theaters all over the world. DTS and DTS 2.0 + Digital Surround" are trademarks of Digital Theater Systems, Inc.

MP3 or MPEG 1 Audio Layer 3 is a file compression format used for digital audio files. It provides files of an extremely small size and may cause a consequential loss of quality.

MPEG Layer-3 audio decoding technology licensed from Fraunhofer IIS and Thomson multimedia.

Specifications



Power supply: AC 220V-240 V 50 Hz Power consumption: 36 W		Dimensions: ca. 430 mm (W) x 89 mm (H) x 352 mm (D) Weight: ca. 5.6 kg Operating temperature: 5°C - 40°C Operating humidity: 35% - 80% RH (no condensation)	
DVD Recording format DVD-RAM: DVD-Video recording format DVD-R: DVD-Video format DVD-RW: DVD-Video Format Video: MPEG2 (Hybrid-VBR) Audio: Dolby Digital 2 channels		VHS Recording format VHS video cassette system standard with FM audio (PAL, NTSC) NTSC recording from an external source or from DVD, not from TV tuner.	
LASER specification LASER product of class 1 Wavelength: 662 nm for DVD, 795 nm for CD Laser performance: Class 3B / Class 3A (optical scan unit)		Video / audio heads 4 rotating video heads, 2 Hi-Fi heads 1 fixed head for normal audio	
Recording discs DVD-RAM: Ver.2.0, Ver.2.1 /3x Rev.1.0, Ver.2.2 /5x Rev.2.0 Playable discs DVD-R: Gen.Ver.2.0, Ver.2.0 /4x Rev.1.0, Ver.2.x /8x Rev.3.0 DVD-RW: Ver.1.1, Ver.1.1 /2x Rev.1.0, Ver.1.2 /4x Rev.2.0 DVD+R: Ver.1.0, Ver.1.1, Ver.1.2		Recording mode PAL/MESECAM : SP: 23.39 mm/s 240 min. LP: 11.7 mm/s 480 min. EP: 7.8 mm/s 720 min. Recording time NTSC: SP: 33.35 mm/s 168 min. EP: 11.12 mm/s 505 min. (with E-240 cassettes)	
Playback only discs DVD-Video, DVD-Audio, DVD+RW, Video-CD, CD-Audio (CD-DA), CD-R/RW (MP3, JPEG, CD-DA, Video-CD-formatted discs)		Forward/rewind: approx. 60 sec., Fast rewind: approx. 43 sec. (with E-180 cass.)	
Other Regional code: 2		Video interface TV system PAL: 625/50 NTSC: 525/60	
Input The input impedance of each input socket is 75 Ohm. AV1 SCART Video: 1 Vp-p AV2 SCART Video: 1 Vp-p, Y: 1 Vp-p C: 0.3 Vp-p (PAL-Burst), RGB: 0.7Vp-p (625/50) AV3 Socket Video: 1 Vp-p S Video Y: 1 Vp-p, C: 0.3 Vp-p (PAL-Burst)		Input The input impedance of each input socket is 75 Ohm. AV1 SCART Video: 1 Vp-p AV2 SCART Video: 1 Vp-p, Y: 1 Vp-p C: 0.3 Vp-p (PAL-Burst) AV3 Socket Video: 1 Vp-p S Video Y: 1 Vp-p, C: 0.3 Vp-p (PAL-Burst)	
Output The output impedance of each output socket is 75 Ohm. AV1 SCART Video: 1 Vp-p; RGB: 0.7 Vp-p (625/50) AV2 SCART Video: 1 Vp-p DVD Socket Video: 1 Vp-p S Video Y: 1 Vp-p, C: 0.3 Vp-p (PAL-Burst) Component Video Y: 1 Vp-p, PB: 0.7 Vp-p, PR: 0.7 Vp-p (Socket) (Component output: Progressive Interlace)		Output The output impedance of each output socket is 75 Ohm. AV1 SCART Video: 1 Vp-p AV2 SCART Video: 1 Vp-p	

Specifications



DVD		VHS	
Audio interface		Audio interface	
Input	The input impedance of each input socket is more than 10 kOhm.	Input	The input impedance of each input socket is more than 10 kOhm.
AV1 SCART	Standard: 0.5 Vrms, Full conduction: 2 Vrms at 1 kHz		-6 dBV
AV2 SCART	Standard: 0.5 Vrms, Full conduction: 2 Vrms at 1 kHz		-6 dBV
AV3 Socket	Standard: 0.5 Vrms, Full conduction: 2 Vrms at 1 kHz		-6 dBV
Output	The output impedance of each output socket is less than 1 kOhm.	Output	The output impedance of each output socket is less than 1 kOhm.
AV1 SCART	Standard: 0.5 Vrms, Full conduction: 2 Vrms at 1 kHz		-6 dBV
AV2 SCART	Standard: 0.5 Vrms, Full conduction: 2 Vrms at 1 kHz		-6 dBV
DVD Socket	Standard: 0.5 Vrms, Full conduction: 2 Vrms at 1 kHz		
Digital Audio	Optical connection (PCM, Dolby Digital, DTS, MPEG)		
Tuner			
Two integrated tuners (one for DVD and one for VCR)			
Tuner system	PAL-I		
Channel range	UHF: CH 21-68		

Note: The values given for weight and dimension are approximate values. The technical data can be changed without advanced notice.

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