

# **Operating Instructions**

**DVD Recorder** 

Model No. DMR-EX75EB DMR-EX85EB



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Specifications

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## **Safety Precautions**

#### 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 (R) or the BSI mark (C) 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.

#### 7 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 by yourself. Refer servicing to qualified personnel.



Back of product, see page 7

#### 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.







#### Inside of product

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





Thank you for your trust and your decision to purchase this top-quality unit. Panasonic is one of the leading manufacturers of entertainment electronics units. We are sure that you will be completely satisfied with this unit.

### Matsushita Electric Industrial Co., Ltd.

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

#### **Direct Sales at Panasonic UK**

- Order accessory and consumable items for your product with ease and confidence by phoning our Customer Care Centre Monday - Thursday 9:00am - 5:30pm, Friday 9:30am - 5:30pm
- (Excluding public holidays).Or go online 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.
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- Also available through our Internet is direct shopping for a wide range of finished products, take a browse on our website for further details.

Interested in purchasing an extended guarantee? Please call 0870 240 6284 or visit our website <u>www.panasonic.co.uk/guarantee</u>

How to	use this operating instruction
54	You can find more information about this subject on the stated page.
PLAY/x1.3	Press the illustrated button.
RAM -R -RW(V)	The described function can be performed with the illustrated disc formats and media. More information about the disc formats and media is on pages 14 and 64-68.
[AV2 Settings]	The texts in brackets are entries from the screen shots.
▲▼⋖⋗	Navigation and direction buttons on the remote control.
RETURN	Remote control buttons which are not shown in the drawing.

### Information about the unit



DVB DVB-T

Pigital Video Broadcasting This unit is a DVD Recorder with integrated tuner. You can receive and record both analog and terrestrial digital channels (DVB-T) without an additional reception unit (Set Top Box).

#### GUIDE

The TV Guide gives you a preview of the TV programmes for the next 7 days from your digital stations. Simply select each programme to store it for Timer programming.

### ноті

The HDMI connection makes it easy to connect up your multimedia units. One single cable transmits both digital video data and digital audio data. HDMI is the world's first complete digital consumer AV interface complying with a non-compression standard.

#### **DV** interface

You can connect your digital camcorder directly to this unit via the DV IN connection. This way it's easy to copy your movies.



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



Please check and identify the supplied accessories.

Use numbers when asking for replacement parts.

(Product numbers correct as of March 2006. These may be subject to change.)

### Accessories

### **Included Accessories**



#### **Optional Accessories**

HDMI cable 1.5m	<b>4.7GB DVD-RAM</b> - 3 Pack.
RP-CDHG15E	LMAF120LE3
HDMI cable 3.0m	<b>4.7GB DVD-RAM</b> - 5 Pack.
RP-CDHG30E	LMAF120LE5
HDMI cable 5.0m	9.4GB DVD-RAM Double Sided - 3 Pack.
RP-CDHG50E	LMAD240LE3



R6/LR6. AA



### **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.



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.

#### Front panel MM SD Card slot Display Disc tray HDD ⊵ DVD ∭ ∭ · ∭ SD ∭ ∭ · ∭ í Mi Mi 57 D/3 Hami 0 (b/l) 0 ۲ $\bigcirc$ 22 CC DOLEY DIGITAL IDEO RAM 1 2 3 4 5 6 7 8 9 10 11 2 3 1 (1/1) Standby/on switch U/I: Press to switch the unit from on to Ξϥ DV input S VIDEO input AV3 standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power. Switching this unit into standby mode does not disconnect it from the mains. 7 4 5 6 EXT LINK **OPEN/CLOSE**: Open and close the disc tray. AV3 input terminal $\bigcirc$ $\bigcirc_{\rm CH} \bigcirc_{\rm CH}$ Channel select button ( 🔺 ) Recording with external EXT LINK equipment 8 9 10 11 DRIVE DRIVE SELECT PLAY ► REC • REC ► x1.3 STOP $\bigcirc$ ulletPlayback Drive select HDD/DVD/SD Record HDD RAM Quick View

#### Messages on the display

Ð	Shows a Timer Recording or Timer mode.
DVD HDD SD	The selected drive is being displayed.
SD ©	The inserted medium is being shown.
REC	The selected drive is Recording. Flashes shortly before a Timer Recording starts.
PLAY	The selected drive is playing.
XP, SP LP, EP	Recording mode / All on: FR mode Flexible recordings/Timer Recordings.
EXT-L	External-Link: A timer controlled recording is being performed by an external unit.
D	Digital channel
网 阿·阿 阿 函 阿·阿 阿	Current time, recording/playback counter, various messages.

#### **On-screen displays**

	Diagon weit
	Please wait.
DVD 1, 2, 3	wrong remote control code.
SETUP	You are in the Setup menu.
READ	Disc is being read.
No READ	Disc cannot be read.
FINAL	DVD is being finalized.
No DISC	No disc has been inserted.
PROTECT	Disc is write-protected.
RETURN	Cancellation of a function.
OFF0:30	The recording time is set to 30 minutes.
REPEAT	Repeat playback is on.
START	A function (copying) is beginning.
COPY	Copying is taking place.
SLIDE	Slideshow running.
99PER	99 % - copying is nearly finished.
STOP	A function has been stopped (copying).
PROG FULL	All 32 timer programme positions are full.
UNSUPPORT	Disc format is not supported.
UNFORMAT	Disc is unformatted.
SLEEP	The hard disk is in the SLEEP mode.
SW-DL	Software download.
X HOLD	Child protection is active.
No FIN	Finalization not possible during the recording.
HDMI	HDMI unit is connected.
Error messages	73

### Rear panel



For a conventional tube television, we recommend using the Scart terminal. You will get a high-quality RGB video picture with an RGB-compatible television.

 If you want to use a progressive scan-capable LCD/plasma television or LCD projector, connect it to the component video outputs for a high-quality progressive video picture.

#### 21-pin Scart terminal

The 21-pin Scart terminal transmits both input and output signals for picture and sound. TVs equipped with the same type of terminal can be connected here. This type of terminal is also called Peritel, Euro Connector and Euro AV. 1 3 5 7 9 11 13 15 17 19 21 2 4 6 8 10 12 14 16 18 20

#### AV1 Scart terminal (TV)

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

#### AV2 Scart terminal (EXT)

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

Before connection, turn off all connected equipment and read the appropriate operating instructions.

BE SURE TO READ THE CAUTION FOR THE AC MAINS LEAD

Choose from one of the connection types A-B that suits your requirement.

#### Use of the supplied RF coaxial cable

To prevent interference patterns from appearing on your TV, use only the supplied RF coaxial cables when you connect this unit to your TV and aerial outlet or aerial cable and Satellite receiver, as shown in connection types A-B.

3

• Keep the RF coaxial cables as far away as possible from other cables.

Do not roll up the RF coaxial cables.



# >>>

#### Automatic setup of the unit

After being switched on for the first time, the unit proceeds with an automatic station search for digital channels. This is followed by the search for analogue channels.

- Turn on the television and select the AV input that this unit is connected to.
- Switch the unit on using the Standby/on-switch.

#### 1 │ DVB Auto-Setup (Tuning digital channels)

Please w	ait! Ch 21		
Prog. C	hannel Service Name	e Net ID TS II	) Quali
1	30 BBC ONE	12302 1228	9 9
2	30 BBC TWO	12302 1228	39 9
3	30 BBC THREE	12302 1228	39 9
4	34 ITV 1	12305 1139	7 9
5	34 ITV 2	12305 1139	7 9

Depending on different countries or regions, the digital TV programme has its own selection of operating frequency channels, frequency bands, transmission parameters and frequencies. The unit automatically searches for all available digital stations.

You can repeat the station search again.

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#### 2 | Auto-Setup (Tuning analogue channels)





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

- To enter the Owner ID, press ENTER.
- Press ►. To set the Owner ID now, use <a>1</a> <a>9</a> to enter a four-digit PIN number.
- Press AV <> to correct the digit.
- Make sure that you will remember the PIN number (make a note of it).
- Press the ENTER button to confirm.
- Select [Yes] with ◀ and confirm with ENTER.
- Press ►. 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.

Auto setup for your unit is complete. The availability of stations may differ regionally. You can now select your favourite stations and store them in the required order in the profiles.

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### Connecting to a television and satellite receiver



If you receive your television programme via a satellite receiver (digital/analogue), connect your DVD Recorder as shown in connection type B.

If your television supports Q Link, use a fully wired 21-pin Scart cable to connect it to the TV.

The analogue stations automatically downloaded through [Download from TV]. If your television supports RGB, set the AV1 Output to RGB 1 or RGB 2 in the Setup menu.

1 Connect the aerial to the RF IN (aerial input) of the external unit.

2 Connect the RF OUT (aerial output) of the external unit with the RF IN (aerial input) of the DVD Recorder.

3 Connect the RF OUT (aerial output) of the DVD Recorder with the RF IN (aerial input) of the television unit.

4 Connect the AV1 terminal (21-pin Scart terminal) of the DVD Recorder with the Scart input of the television unit.

5 Connect the external unit with a 21-pin Scart cable to the AV2 terminal of the DVD Recorder.

6 Connect the DVD Recorder, the TV and the external unit to the household mains socket.

### Auto-Setup

#### Auto-Setup with connected Satellite Receiver and aerial

After completing the above connections, proceed to the Auto-Setup.

#### Auto-Setup with connected Satellite Receiver

Turn on the television and select the AV input that this unit is connected to. Switch on the external unit and DVD Recorder.

[Auto-Setup] follows automatically and if it ends with the note: [No stations found !].

- Select [No] with ▶ and confirm with ENTER.
- You can complete the Owner ID now. To skip this step and do it later, press the **RETURN** button.

The TV Guide does not show any information if you have connected the unit to a satellite receiver only.

The date and time are not set automatically. Set them manually. An incorrect date or time affects the programmed recording of television programmes (note summer and winter time).

Your DVD Recorder is now ready to use.

Switch the DVD Recorder to AV2 with CH ◊.

You see the television picture from the external unit.

#### View / record satellite programmes

Press **INPUT SELECT** to select the input channel AV2 or put this unit in standby mode.

To record satellite programmes refer to "Timer Recording from Sat with VIDEO Plus+".

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## **Remote Control**

			_ TV _		
DVD	Standby/on switch Press to switch the unit from on to standby mode or vice versa. In standby mode the	DVD		Switch the TV on and off. Select the AV input on the TV set.	<u> </u>
	unit is still consuming a small amount of power.		CH	<b>CH</b> = Select the programme position or TV set. <b>VOLUME</b> = Volume control of the TV set	n the
DRIVE SELECT	<b>DRIVE SELECT</b> Select the HDD, DVD or SD drive.		PAGE CH	<b>CH</b> = Programme selection button. <b>PAGE</b> = Scroll in the TV Guide.	13
VCD	Direct entry using the number buttonsSelection of channels, title numbers, etc.5: 0 5: 15: 1 5:	4       5○       6       ✓         7       8       9       □	VIDEO Plus+	VIDEO Plus+ recording for analogue stations.	21
JPEG MP3 JPEG	5:005     15:015       5:0005     15:0015	SLOW/SEARCH		Delete a title.	
*	Delete a function.	STOP PAUSE PLAŸX1.3	INPUT SELECT	Select button to switch AV input betwee AV1, AV2, AV3 (Front), AV4 and DV.	en
SKIP-	SKIP = Skip chapters, titles or 14	PROG/CHECK	SLOW/SEARCH	SLOW = Slow-motion playback. SEARCH = Search during playback.	14
	pictures.	MUNICIPAL CONTROL OF C	PAUSE	Pause a recording or playback.	1417
STOP	Stop a recording or playback.	SUB MENU	PLAY/x1.3	PLAY: Start playback. x 1.3: You can increase the playback speed.	14
Ì	Launch the digital channel information or programme details.		PROG/CHECK	Check/change a Timer Recording.	20
	Direction buttons in the menu guide.	TEXT STTL DISPLAY TIME SLIP	GUIDE =	- Launch the TV Guide.	18
	Select ▲ ▼ ■ groups of titles. ■ III ► Frame or slow-motion playback.		DIRECT	NAVIGATOR = Launch the Title View.	26
	ENTER = Select or save a setting.	Panasonic	FUNCTIO	<b>DNS</b> = Launch the main menu.	25
SUB MENU	Launch SUB MENU's.	DVD/TV		Return to the previous menu.	
	<b>RED</b> button: menu guide (Profile, GUIDE, Digital TEXT, Manual Tuning).		REC	Recording.	13
	<b>GREEN</b> button: menu guide (Profile, GUIDE, Digital TEXT).		REC MODE	Select recording mode (XP, SP, LP, EP).	13
CREATE CHAPTER	YELLOW button: menu guide (Profile, GUIDE, Digital TEXT)14Dividing a recording into chapters.			Timer Recording with external recording control.	21
MANUAL SKIP	BLUE button: menu guide         (Profile, GUIDE, Digital TEXT).         Jump forward 30 seconds.		DIRECT TV REC	Direct TV recording.	17
TEXT	Launch the Digital TEXT service. [24]		STTL IPD	Subtitles.	24
DISPLAY	Launch the picture and sound settings. 70			TIME SLIP = Select the time frame.	14

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You can also switch on the unit from Standby mode using the PLAY ►, GUIDE, DIRECT NAVIGATOR, VIDEO Plus+ and PROG/CHECK buttons.





#### Playback from DIRECT NAVIGATOR

The DIRECT NAVIGATOR menu shows all the recordings and timer programmes you have created yourself. The recordings can be selected directly and replayed immediately without searching.



#### Simultaneous recording and playback HDD RAM

You can play the recording or a different title during the current recording or Timer Recording. Playback does not affect Timer Recordings. Recording begins at the programmed time.





Depending on the disc type, playing may start automatically.

RAM R -R DL -RW(V) +R +R DL +RW Disc playback stops when a Timer Recording starts.

#### Direct input via the number buttons

Selection of channels, title numbers, etc.

VCD	5: 0 5.	15:15
JPEG MP3	5:005	15:015
JPEG	5:00059	15:0015

**DVD-A** When the screen saver is shown, you can enter a group number. On some discs, this function is only available when playback stops.

**Playback starts automatically (with prerecorded discs)** DVD-A DVD-V VCD CD -R(MP3) Playback always starts at the beginning of the disc. If the disc has its own disc menu, then it is displayed. The operation of the disc menu depends on the inserted disc.

Due to the programme structure determined by the manufacturer, the described functions may not be available.

If O appears on the television unit, the procedure is inhibited by the unit or the disc.

Use the following buttons to launch the disc menu again: DVD-V: **SUB MENU**, DVD-A: **DIRECT NAVIGATOR**, VCD: **RETURN** 

HDD/DVD-RAM functions possible during playback in each case				
DVD PLAY ► HDD PLAY ►				
(HDD) REC	(HDD) REC			
(DVD) REC	(DVD) REC			

### Formatting

RAM -RW(V) +RW -RW(VR) +R +R DL Only for new discs If using an unformatted disc, you must format it before the first recording. After inserting the disc, the formatting message appears automatically. Formatting prepares the media, such as a recordable DVD-RAM, for recording. All data is irreversibly erased.





We recommend using a DVD RAM to utilise the greatest possible functional scope of this unit.

RAM RAM4.7						Ƴ: Can do	, X: Cannot do
Disc Type	DVD-RAM	DVD-R	DVD-R DL	DVD-RW	+R	+R DL	+RW
Function	RAM RAM4.7	R R R 4.7	R R DL	R W	0	0	0
Recording	~	$\checkmark$	∕*	$\checkmark$	~	∕*	~
Rewritable	$\checkmark$	×	×	$\checkmark$	×	×	$\checkmark$
Copy-once recording (digital broadcasts)	(CPRM compatible discs only)	×	×	×	×	×	×
Playing on other equipment	(RAM compatible equipment only)	$\checkmark$	~	$\checkmark$	~	~	~
		$\mathbf{+}$					
To play	DVD-R DVI	D-R DL DVE	D-RW +R	+R D	L on oth	ner equip	ment,

## **Use the Finalize feature!**

DVD-R, etc. recorded on this unit cannot be played on other players immediately after recording. Using the Finalize feature allows you to play these discs on other players. (However, once the disc is finalized you will no longer be able to record to the disc.)



\*\* This unit cannot be used for direct recording on a DVD-R DL/+R DL. You can record on the hard disk and then copy the recording to a disc.



### **TV** Guide





The TV Guide gives you an overview of the programme for your digital television and radio stations up to 7-days. For many of these programmes, you can select additional information provided by the stations. You can sort the programme preview according to various topics such as sport, films etc., according to categories such as TV or radio and select programmes for Timer Recordings.



### View TV Guide (landscape or portrait)

Portrait - sorted by time Landscape - sorted by channels

	TV Guio	le: Land	lscape		Ca	togor	v	Mon 06	/03/06 19:3	5 — C	urrent date
TV Guide date	Mon 06th				Alls	Servic	y es	Al	Types	a	iu une
TV Guide time	19:00 - 20:0	00  Emm	nerdale : In	todays	s's sho	SW WG	e will f	ind a wa	ay 🤅		
		Time	19:30	20:0	0	20:3	0	21:00	21:30	— D	etails available
	1 BB	C1 🔺	CSINY	DIYS	S.O.S.			Red Cap	)		
	2 BB	C2	Hot Wars	1	Θ	Hollid	ay Pro	ogramme		1	
Channel	7 ITV	'1	Emmerd	Corot	tation S	Street			Bill	1	
Selected	10 Ch	onnol/	apheap	Challe	enge	Pepsi	Chart	t Show		<b>1</b> A	Timer Recording
programme	31 Cha	annel5	News	Sex i	n the C	City		🕘 Termi	nator2	is	programmed
	45 ITV	2	Me out	of here	9!	Pople	dol		News	1	
	70 S40	C 🔹	Rugbi	15 to	1			Scraphe	ap Challenge	÷	
			+24 Hr		(	Catego	ory	Pi	og. Type		
	SELECT	- VIEW O RETURN	i info Guide Ch	ange Di	splay M	ode	TV Gu Mon 13t	iide: Portr հ	ait	Category All Services	Mon 06/03/06 19:35 Prog. Type All Types
	Landscape	e					< 1E	3BC1	2 BBC2	7 ITV1	] 10 Channel4 🕨
							19:30 - 2 20:15 - 2	20:15 Ne 21:30 Ho	ot Wars		
							21:30 - 2	21:45 🕘 Ca	protation Street		Û
		GUIDE					21:45 - 2	22:00 So	rapheap Challeng	e	
		1-	$\sim$			ŀ	22:00 - 2	22:15 ONE	WS out of here!		
	L	3					22:45 - 2	23:30 Ru	igbi		
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		(Por	rait/Lands	scape	e)	ſ	-24	Hr	+24 Hr	Category	Prog. Type
							SELECT	TIMER REC RETURN	(i) info Guide Change Di	splay Mode	Page + ∕ Page - ∨

Portrait



(Timer programming screen)

Analogue stations (A)

Guide Change Display Mode

Page - 🔽

The TV Guide does not contain information for analogue programmes.



#### Automatic title transfer

When programmes are recorded from the TV Guide, the name of the selected programme is transferred automatically for the recording. If an analogue station broadcasts teletext, the unit automatically records the name of the programme and the station, on condition that the [Title page] setting has been entered correctly in the station table. 46 It can take approx. 10 minutes to find the title with this unit, and sometimes this fails.

Note

The programme overview is available immediately if your DVD Recorder has found a digital station and loaded the information in the memory. This process can take a while depending on the particular station.

The programme overview data are continuously downloaded in the background when the unit is switched on. That means that the programme overview can sometimes change while you are looking at it.

If the unit is disconnected from the AC mains, all programme data are lost

The broadcasters allocate individual programmes to topic areas. If the selection is not complete, this is not an error in the unit.



(during Timer Recording)

to delete a Timer

programming

Timer Off/Timer On

Deactivate or activate a Timer programming e.g. to interrupt a daily or weekly Timer programming.

### **Manual Timer Recording**

Note

The recorded titles can only be copied in High Speed Mode later on if the titles were originally recorded in High Speed Mode on the HDD.

Recording

Make sure that there is a recordable disc in the selected drive. Otherwise, the Timer Recording will not run.

The unit automatically switches to timer mode.

REC flashes in the unit's display one minute before the recording is set to start. A Timer Recording does not start while a disc is being formatted, deleted or finalized. The recording begins afterwards.

[HDD] [RAM] If you programmed the timer programmes one after the other in sequential order, the first few seconds of the second Timer Recording are not recorded. With other types of discs, it is approx. 30 seconds.

If you receive your TV programme via a satellite receiver (digital/analogue): On the external unit, select the station with the programme that you want to record. The station can not be changed during the recording. The programme on the set station is always recorded.

Name : Select [AV2] as the name of the TV station with **AV**.

### Timer Recording via external units (e.g. satellite receiver)

#### Recording programming on an external unit



The programming for a Timer Recording takes place on an external unit. Read the operating instructions for your external unit.

The recording begins if an appropriate signal is received from a connected unit. As long as a video picture is transmitted by the external unit, the selected drive will record it.



## VIDEO Plus+ Recording (for analogue channels)

To Others VIDEO Plus+ Record

Entering a VIDEO Plus+ number causes the data for programmes provided by broadcasters to be saved. The appropriate codes can be found in newspapers and TV guides. You can programme up to 32 programmes per month in advance.



### **Timer Recording from Sat with VIDEO Plus+**



#### VIDEO Plus+ Codes for satellite receivers

This DVD Recorder is not designed to control (switch on or change channel) your satellite receiver. However, it can be taught to recognize VIDEO Plus+ Codes for satellite stations. The satellite receiver 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 instructions for use of such timer facilities.

For your DVD Recorder to recognize 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 the DVD Recorder will remember it whenever you use a VIDEO Plus+ Code for the station again.

TIMER	R RDING	emain I	HDD	36:40 \$	SP 9:4	DVD 40:23	1:30 6/ 3	SP THU
No	o. Name	Date	Start	Stop	HDD DVD	Mode	STTL	Drive space
<b>O</b> 01	AV2	6/ 3 THU	17:00	17:15	HDD	SP		OK
@ 02	AV2	6/ 3 THU	20:45	21:30	HDD	SP		OK
		New	Timer F	Program	me			
[Cha	n. Name	BBC 2W						
Ø, RE	NTER (§ TURN	) SUB MENU			(*) Dele	te	Timer	Off

#### VIDEO Plus+

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 **CH** button to select the channel or AV input that is to be used for recording from the satellite channel.
- Press the ENTER button to memorize 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 ★ 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.

Syn	nbols		
	The title is currently being recorded.	HDD	The title was recorded on HDD.
Θ	Shows a Timer programming.	DVD	The title was recorded on DVD.
۲	A daily or weekly Timer Recording was stopped. The icon disappears when next Timer Recording starts.	G	The title is automatically renewed.
W	The title overlaps other recordings.		The title is selected.
6	HDD/DVD was full. The title could not be recorded.	<b>&gt;&gt;</b> !	Titles and playlists which can be copied on a DVD-R etc. in the high speed mode, but not on +R, +R DL, and +RW.
×	The programme cannot be played back due to damaged data or cannot be recorded for another reason.		Titles and playlists which can be copied on a DVD-R etc. in the high speed mode.
â	The title is write protected.	G>	The title is provided for one-time copying and will be deleted after it is copied.
Ø	The programme was copy-protected so that the title could not be recorded.		Titles or playlists with pictures (pictures cannot be copied).
L>	The title was transferred from DVD to HDD.	N NTSC	The title or the playlist was recorded with a TV system other than that currently set in the unit.
	Title with restriction for one-time copying.	P PAL	be played back. Switch your TV system to playback these titles/playlists.

### **Entering text**

Rc

You can give names to your programmes or discs in the different menus and while setting up the Timer Recording.



## STATUS displays/Digital channel information



## **FUNCTIONS** menu

Setup

HDD Management

DVD Management

Card Management

-		
	_	

Display the FUNCTIONS menu to access the main functions on this unit quickly and select functions like Timer Recording etc.



Changing your unit's presettings

Formatting SD Cards

Formatting and deleting all titles from HDD

Formatting and finalizing discs, write protection

44

54

54

55

### FUNCTIONS / Playback







VIDEO

 $\ensuremath{\textbf{RED}}$  button: Title View

PICTURE

**GREEN** button: Picture View (JPEG)



#### **Overview of DIRECT NAVIGATOR**

You can archive, edit or start playback after selecting a title in DIRECT NAVIGATOR. Selecting a title or chapter

- Select a title or chapter with ▲▼◀► or □−⑨.
- Selecting other pages
- Select [Previous] or [Next] with ▲▼ ◄► and confirm with ENTER.
- **Cancelling a function**
- Depending on the specific entry, select [No] or [Cancel] with ▲▼ ◀► and confirm with ENTER. You can also cancel a function with RETURN.



#### Launching the DIRECT NAVIGATOR menu

#### • Press FUNCTIONS.

- Confirm [ Playback] with ENTER. The DIRECT NAVIGATOR menu appears.
- Playback
- Select a title with ▲▼ ◄► and start playback with ENTER.

#### SUB MENU



- Press SUB MENU to edit a title.
- Select the desired option with ▲▼ and confirm with ENTER.

#### Delete 🛛

When you execute this process, the title will be deleted and cannot be restored.

- Confirm [Delete] with ENTER.
- Select [Delete] with ◀ and confirm with ENTER.

The available recording time may remain the same after deleting a short title. In the case of a DVD-RAM, the storage space of a deleted title becomes available for a new recording. For -RW(V), +RW: Available recording space increases only when the last recorded title is deleted. With other discs (-R, R DL, +R, +R DL), the storage space is not released by deleting titles.

#### Properties

- Information on the title, such as name, date and time is displayed.
- Select [Properties] with ▲▼ and confirm with ENTER.

Table Display/Thumbnail Display: changing the Title View.The last used display remains saved even when the unit is switched off.

Sort: Sorting in the Table Display of the Title View. HDD

The titles can be sorted according to No., Name, Date, Day, Start Time and Name of title. The adjusted search option is underlined.

• Select the required option with ▲▼ and press ENTER to confirm.

Album View/Title View: VIDEO (GREEN button) / PICTURE (RED button). Display of video data or picture data.

Editing several elements Select the desired title with ▲▼◀► and press **PAUSE II**. A check appears. Repeat this process to select other titles. Press **PAUSE II** again to clear the selection.

Delete Properties Edit Chapter View Table Display Album View



#### Editing titles in the SUB MENU







#### SUB MENU Delete Properties S) Edit Enter Name Chapter Select [Edit] with ▲▼ and confirm with ENTER. Set up Protection Table Dis In the submenu, select the desired option with AV and **Cancel Protection** Album Vi confirm with ENTER. Partial Delete Change Thumbnail -RW(VR) Not available Enter Name Divide Title Enter or change the title of the programmes. The full name is displayed in the Properties submenu.

HDD RAM +R DL +R +RW

#### Set up Protection

- HDD RAM +R DL +R +RW **Cancel Protection**
- HDD RAM

#### **Partial Delete**

Make sure that you really want to delete parts of the recording.

- · At the desired start point, confirm [Start] with ENTER.
- · At the desired end point, confirm [End] with ENTER.
- If you want to carry out the deletion, select [Exit] with ▲▼ and confirm with ENTER.
- In the next screen, select [Delete] with ◄ and confirm with ENTER. You exit the menu after the deletion.
- To delete other parts, confirm [Next] with ENTER.
- Select [Delete] with ◀ and confirm with ENTER. After each deletion, you can select the next start and end point.
- To exit the menu, select [Exit] with **AV** and press **ENTER**.
- You may not be able to identify a start and end point if they are less than 3 seconds apart or if the recorded image is a still picture. The unit switches to PAUSE mode at the end of the title. The available recording time on the disc may remain the same after deletion.

#### -RW(VR) Not available Change Thumbnail

You can select any position in a title as the thumbnail for the title view.

- Press PLAY ► to start playback.
- At the position which is to be displayed as the new thumbnail, confirm [Change] with ENTER. The selected thumbnail is displayed.
- Confirm [Exit] with ENTER. The selected thumbnail is displayed in the title view.

#### **Divide Title** HDD RAM

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

- At the position where the title is to be divided, confirm [Divide] with ENTER.
- Confirm [Preview] with ENTER. A section will be played back from 10 seconds before to 10 seconds after the dividing point.
- Confirm [Exit] with ENTER.
- In the next screen, select [Divide] with ◄ and confirm with ENTER. A short section of the recording right before the dividing point may be lost. The divided titles retain the name of the original title.

You cannot use this function if the resulting sections are extremely short or if you have saved more than 99 titles to DVD-RAM (500 titles to HDD).

### **DIRECT NAVIGATOR**



#### Editing chapters in the SUB MENU HDD RAM

- Press FUNCTIONS.
- Confirm [ Playback] with ENTER.
- Select the desired title with ▲▼◀▶ in the Title View menu.
- Press SUB MENU.
- Select [Chapter View] with ▲▼ and confirm with ENTER.



#### SUB MENU



- Select the desired chapter with ▲▼◀►.
- Press SUB MENU.
- Select the desired option with ▲▼ in the submenu and confirm with ENTER.



#### Delete Chapter M

• Select [Delete] with ◄ and confirm with ENTER.

#### **Create Chapter**

Divide the title into chapters. Determine the points where a new chapter needs to begin. The chapters can be selected later during playback with **SKIP I** 

- Press ENTER at the position where you want to create the chapter.
- Repeat this step to create additional chapters.
- Select [Exit] with ▼ and confirm with ENTER.

A short section right before the dividing point may be lost.

#### **Combine Chapters**

• Select [Combine] with *◄* and confirm with **ENTER**.

The selected chapter is combined with the following chapter.

Title View: Return to Title View.

You can jump to the beginning/end of a title/chapter with **PAUSE II** and **SKIP** I → **N**. Find the position for a marker with **SKIP** I → **N**, **SLOW/SEARCH** → **N**, **TIME SLIP**, **MANUAL SKIP** or →. You can jump between set markers with **SKIP** I → **N**. Editing several elements S Select the desired title with A → and press **PAUSE II**. A check appears. Repeat this process to select other titles. Press **PAUSE II** again to clear the selection.



#### JPEG/TIFF playback from HDD/DVD-RAM/SD

**JPEG** (Joint Photographic Experts Group), a system for compressing/decoding coloured still pictures. There are only slight losses in picture quality in spite of the extreme compression.

**TIFF** (Tag Image File Format), a system for compressing/decoding coloured still pictures. It allows digital cameras and other units to save top quality pictures.



If TIFF still pictures are played back or if there are a lot of files, sessions and/or folders, it can take a relatively long time to display the data.

#### Picture playback HDD RAM SD

If you have saved pictures in JPEG format on HDD or DVD-RAM, you can playback and edit these using the Album View function.

The albums are displayed with preview pictures.

To playback the pictures, an album must be selected and opened.

- Press DIRECT NAVIGATOR.
- HDD RAM In the title view, press SUB MENU. Select Album View with ▲▼ and press ENTER to confirm.
- In the Album View select the required album with ▲▼ ◀► and press ENTER to confirm.
- Select the required picture in the Picture (JPEG) View with ▲▼◀► or □–⑨ and press ENTER to start the playback
- Press STOP to stop the playback.

#### **Display picture attributes**

- Press twice (1) during the playback to select the display.
- Press (i) again to leave the display.

SUB MENU	Rotate RIGHT Rotate LEFT Zoom in	
SUB MENU during picture playback HDD RAM SD R CD • Press SUB MENU.	ENTER RETURN	

Select the required option with AV and press ENTER to confirm.

#### **Rotate RIGHT/Rotate LEFT**

- Press SUB MENU during the playback.
- Select the required setting with **AV** and press **ENTER** to confirm.

**Zoom in/Zoom out** (Only available for pictures smaller than 640 x 480 pixels) • Press **SUB MENU** during the playback.

- Select [Zoom in] with ▲▼ and press ENTER to confirm.
- To go back to the original size, press ENTER to confirm [Zoom out].
- Press RETURN to return to the Album View.

Editing several elements Select the desired title with ▲▼◀▶ and press **PAUSE II**. A check appears. Repeat this process to select other titles. Press **PAUSE II** again to clear the selection.



Start Slide Show Slide Show Setting

Add Pictures Create Album

Edit Album

Title View





#### Slide Show from the Album View

- Select the required Album from the Album View with ▲▼◀►.
- Press PLAY



#### SUB MENU in the Album View

• Press SUB MENU.

• Select the required option with ▲▼ and press ENTER to confirm.

#### Start Slide Show

The pictures of the selected folder are played back automatically in succession in the selected display interval. The Slide Show is repeated if you have set [Repeat Play] to [On] in the Slide Show.

Press STOP ■ to stop the Slide Show.

#### Slide Show Settings

You can stipulate the Display Interval for each picture, together with Repeat Play of the Slide Show.

- Select [Display interval] with ◀► for each picture.
- For Repeat Play of the Slide Show select [Display interval] with ▲▼ and change the setting with ◀►.
- Press ENTER to confirm.

#### Add Pictures

Pictures are assigned to the selected album from other albums.

• Select [Start] with ◀ and press ENTER to confirm.

Step **1** • Select the required album with **▲V◄►** and press ENTER to confirm.

- Step Use Copy Pictures to copy individual pictures or Copy Album to copy a complete album.
  - Select [Copy Pictures] or [Copy Album] with ▲▼.
  - Press ENTER to confirm.
  - Copy pictures: select the pictures you want to copy and press ENTER to confirm.

Step I The pictures of the selected Album are copied.

- Step 4 To continue copying, select [Yes] with ◀ and press ENTER to confirm. Repeat steps 1-3.
  - To end copying, press ENTER to confirm [No].

#### **Create Album**

To create a new album, pictures must already exist on the disc or SD card. Pictures from the selected album are copied into the new album on being created.

- Step **II** Select the required Album which you would like to copy the pictures with ▲▼◀▶ and press **ENTER** to confirm.
- Step 2 Use Copy Pictures to copy individual pictures or Copy Album to copy a
  - complete album.
  - Select [Copy Pictures] or [Copy Album] with ▲▼.
  - Press ENTER to confirm.
  - Copy pictures: select the pictures you want to copy and press ENTER to confirm.

Step 3 The pictures of the selected Album are copied.

- Step **I** To continue copying, select [Yes] with ◀ and press **ENTER** to confirm. Repeat steps 1-3.
  - To end copying, press ENTER to confirm [No]. Select [Yes] to give the Album a name. Enter the Album name.
     If you select [No], then the date is saved as name of the Album.



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Set Display Interval and Repeat Pla	у.
Display interval 4 5 sec.	•
Repeat Play Off	
Press ENTER to set.	
SELECT	
ENTER RETURN	

Slide Show Setting

Add Pictures OVD-RAM	Step 1 2 Please s	2 3 4 elect album to copy.	
001 12/9/05 Total 1 100 DVD	002 23/9/05 Tota CAR	003 112 11 10/05 Total 5 Date: 13/ 7/20	003
			Þ
Previous	Page (	01/01 Next	

### **DIRECT NAVIGATOR**



#### SUB MENU in the Album View

#### SUB MENU S

- Press SUB MENU.
- Select the required option with AV and press ENTER to confirm.

#### **Edit Album**

- Select [Edit Album] with ▲▼ and press ENTER to confirm.
- Select the required option with AV and press ENTER to confirm.

Enter Album Name Enter the Album name. 23

#### Delete Album

- The selected Album is deleted and cannot be recovered.
- Select [Delete] with 
   ■ and press ENTER to confirm.

#### Set up Protection/Cancel Protection

- You can set up or remove cancel protection for pictures.
- Select [Yes] with ◀ and press ENTER to confirm.

#### Copy to HDD / copy to DVD-RAM

- The pictures of the album are copied to the HDD or to DVD-RAM

SUBMENU	Delete Picture
S	Set up Protection
$\bigcirc$	Cancel Protection
SUB MENU in the Picture (JPEG) View HDD RAM SD	DPOF
<ul> <li>Select an Album in the Album View with AV &lt;&gt; and</li> </ul>	
press ENTER to confirm.	Album View

- Press SUB MENU in the Picture (JPEG) View
- Select the required option with AV and press ENTER to confirm.

#### Delete Picture

- The selected picture is deleted and cannot be recovered.

#### Set up Protection/Cancel Protection

- You can set up or remove cancel protection for pictures.
- Select [Yes] with ◀ and press ENTER to confirm.

#### DPOF 🗗 🗾 SD

Stipulates the number of picture prints in the selected folder.

 Select the number with ◀▶ or with the numerical buttons and press ENTER to confirm. The pictures are marked with Picture (JPEG) View.

0 resets the setting. Settings adjusted previously with other units are reset.

DPOF (Digital Print Order Format) is a standard format for printing freeze frames recorded for example with a digital camera.

It may be possible that other units cannot show the printer settings adjusted with this unit (DPOF). If the folders or files do not correspond to the DCF standard or there is not enough capacity on the card, the setting cannot be adjusted.

#### Album View

Return to Album View.

#### Select Folder SD

You can select a folder directly and open it. It may be possible that folders which were not created with this unit cannot be opened.

• Select the required folder with **◄** and press **ENTER** to confirm.

### Editing several elements

Select the desired title with ▲▼◀▶ and press PAUSE II. A check appears. Repeat this process to select other titles. Press PAUSE II again to clear the selection.





Copy to F Enter Album Name Delete Album **Title View** Set up Protection **Cancel Protection** 

Start Slide Show

Add Pictures

Create Album

Edit Album

Slide Show Setting

### **FUNCTIONS / Playback**

### **DIRECT NAVIGATOR**





#### JPEG/TIFF playback from CD/DVD-R

The Disc contains JPEG/TIFF data as well as MP3 data. After inserting the disk, the message appears referring to the preset playback mode.

- · Press ENTER to confirm.
- Press FUNCTIONS and press ENTER to confirm the menu.
- Select the required file type with AV and press ENTER to confirm.

• Press DIRECT NAVIGATOR. The screen Picture (JPEG) View appears.

#### Playback of single pictures

- Select the required picture with ▲▼◀► or with □-⑨ and press ENTER to start playback.
- Stop picture playback with STOP or DIRECT NAVIGATOR.

#### Folder

- Select [Folder] with ▲.
- Press SUB MENU.
- Select the required option with AV and press ENTER to confirm.

Start Slide Show 30

#### Slide Show Setting 30

#### **Change folder**

- Select [Folder] with ▲ and press ENTER to confirm. The available folders are shown.
- Select the required folder with AV and press ENTER to confirm.

You can select a folder directly and open it. It may be possible that you cannot open folders not created with this unit.







#### MP3 playback -R CD

This unit can play MP3 that were recorded with a computer. Files are captured as tracks and folders as groups.

"TOTAL" includes all tracks in all groups on the disc.

In addition to MP3 data, the disc also contains JPEG data:

After a disc is inserted, a message appears regarding the preset playback mode.

- Confirm the message with ENTER.
- Press FUNCTIONS and confirm [Menu] with ENTER.
- Select the desired file type with **AV** and confirm with **ENTER**.

#### Starting playback

- Press **DIRECT NAVIGATOR** to launch the Menu screen.
- Select the desired track with ▲▼ or □-⑨ and confirm with ENTER. Playback takes place up to the last track in the selected group.
- Press STOP to end playback. Use DIRECT NAVIGATOR or RETURN to exit the screen. Browse through the pages with SKIP | The lists of groups follow one after the other.
  - TOTAL: Selected track number/ Shows the track currently being played Total number of tracks G: Group number No.: Selected group number Group: Selected group name
  - T: Track number in the group

#### Selecting a group

- Press ► to switch to the Tree menu.
- The contents of the selected group are displayed.

### **FUNCTIONS**

### Copy

You can use the COPY Navigator to copy titles from HDD to DVD. Other media than RAM are finalized after copying. They can then be played back on other players. Further recording is not possible on a finalized disc.

HDD  $\longrightarrow$  RAM -R -R DL -RW(V) +R +R DL +RW

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Copying in High Speed Mode is only possible if the title was recorded previously in High Speed Mode on HDD. While copying in High Speed Mode, the unit makes noises which can be reduced.



### **COPY Navigator**



Notes for copying to DVD-R DL/+R DL

If you are not copying in High Speed Mode, the

titles are temporarily copied on the hard disk at

normal speed and then copied to DVD-R DL/+R

DL at high speed. The temporary tieles are then

- there is not sufficient capacity on the hard disk

- the number of titles on the hard disk and the

number of titles copied to DVD-R DL/+R DL

deleted from the hard disk. Copying to DVD-R

DL/+R DL is not possible if

together exceed 500.

2	

#### **HDD** Information about High Speed copying

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Copying in the High Speed Mode allows for fast copying of titles, pictures and playlists. Set the [Rec for High Speed Copy] setting to [On] in the [Setup] menu. For copying to High Speed compatible discs, press **ENTER** to confirm [DVD Speed for High Speed Copy] and adjust the necessary setting.

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

- However, the High Speed Copy Mode does not work in the following cases:
- the playlists consist of titles from different recording modes
- the playlists consist of several titles with the FR recording mode
- the playlists contain different audio modes
- the titles contain lots of deleted segments
- copying titles with MPEG2 moving pictures from SD card to HDD

- +R +R DL +RW titles recorded in FR and EP mode (min. 5 hours long) (indicated by >>)

If you select a recording mode with higher quality than the original, this does not improve the picture quality. However, it does prevent a deterioration in picture quality.

If there is not sufficient capacity on the disc, the unit changes to the FR Mode. If you are not copying in High Speed Mode, titles are copied in the original recording mode and playback lists in the FR mode.

During copying, timer-controlled recordings are always made to the HDD regardless of the selected recording drive.

No playlist can be reproduced when copying titles which are restricted for copying just once.

Titles which are restricted for copying just once can be deleted from the hard disk after copying to a CPRM-compatible DVD-RAM.

Titles with recording restrictions and playlists cannot be transferred to the same copying list.

If you stop copying a title in the High Speed Mode in the middle, the corresponding title is not recorded. Even if the title was not copied to DVD-R, DVD-RW(V) or +R, this still reduces the remaining capacity of the disc.

#### Recording and playback during copying in High Speed Mode

**HDD**[**RAM**] Recording and playback are possible while copying in High Speed Mode but with the following exceptions:

- delayed playback and copy list editing is not possible
- does not apply to copying with automatic finalizing
- does not apply to copying MPEG2 moving pictures to an SD card
- no playback of freeze frames
- no playback of playlists when copying titles permitting only one-off recording.
- Press ENTER to switch the screen display off. This does not affect copying.
  - Select information about the copying procedure with (i).
     If you stop copying a title in the High Speed Mode in the middle, the corresponding title is not recorded.

#### Approximate copying timer (at maximum speed)

HDD	5x high s compatib	speed ble RAM	16x high compatib	speed le -R	4x high sp compatibl	eed • -R DL	4x high sp compatible	eed e -RW(V)	8x high sp compatibl	eed • +R	2,4x high s	peed +R DL	4x high sp compatibl	eed e <b>+RW</b>
mode/-time	Required time	Speed	Required time	Speed	Required time	Speed	Required time	Speed	Required time	Speed	Required time	Speed	Required time	Speed
XP	12 min.	5x	6 min.	10x	15 min.	4x	15 min.	4x	8 min35.	7x	25 min.	2,4x	15 min.	4x
SP	6 min.	10x	2 min.25	25x	7 min.30	8x	7 min.30	8x	4 min.10	14x	12 min.30	4,8x	7 min.30	8x
LP 1 Hour	3 min.	20x	1 min.15	48x	3 min.45	16x	3 min.45	16x	2 min.25	25x	6 min.15	7,2x	3 min.45	16x
EP(6 Hours)	2 min.	30x	52 sek.	69x	2 min.30	24x	2 min.30	24x						
EP(8 Hours)	1,5 min.	40x	42 sek.	86x	1 min.53	32x	1 min.53	32x						

Copying in High Speed mode. Please wait. Press and hold RETURN for 3 sec to stop copying Completes in 0:04 Percent complete 24%

Press ENTER to record or play back Copy continues.



#### Copying from DVD-Video with time control

 $\boxed{\texttt{DVD-V} \longrightarrow \texttt{HDD}}$  The complete disc can be copied or the copying time can be defined. The titles are copied without chapters.

Nearly all commercially available videos and DVD-Videos have copy protection. The contents of such media cannot be copied with this unit.

- Press FUNCTIONS, select [To Others] with ▲▼ and press ENTER.
- Select [Advanced Copy] with ▲▼ and press ENTER to confirm.
- Select the required option with ▲▼.

#### **Cancel All**

All adjusted settings and copy lists are deleted!

Select [Yes] with ◀ and press ENTER to confirm.

Сору	
Cancel All	
1 Copy Direction	
DVD → HDD ►	Destination HDD
2 Copy Mode DVD-Video SP	
3 Copy Time Off	
Start Copying	Select the copy direction.

1 Copy Direction Source DVD Destination HDD

Select the copy direction.

2 Copy Mode ◀	Format	DVD-Video
•	Recording Mode	SP

Press **ENTER** to change the settings.

3 Copy Time	•	Time Setting	Off
•		Enter the end t copying.	ime for

Time Setting	On
Copy Time	2:00

Press **ENTER** to change the settings.

- 1 Copy Direction
- Select [Source] with ▶ and press ENTER to confirm.
- Select DVD with ▲▼ and press ENTER to confirm. The target drive is recognised automatically.
- Go back to [Copy Direction] with ◄ and select [Copy Mode] with ▼.

#### 2 Copy Mode

- Select [Recording Mode] with ▶ and press ENTER to confirm.
- Select the required recording mode [XP,SP,LP,EP] with ▲▼ and press ENTER to confirm. The format is automatically detected. The High Speed or Normal Speed setting is not possible during time-controlled copying.
- Go back to [Copy Mode] with ◄ and select [Copy Time] with ▼.

#### 3 Copy Time

- Select [Time Setting] with ▶ and press ENTER to confirm.
- Select [On] or [Off] with ▲▼ and press ENTER to confirm.
- [On]: Select [Copy Time] with ▼ [Copy Time] and press ENTER to confirm. Change the time setting with ▲▼ ◀► and press ENTER to confirm. Enter a time which is longer by a few minutes to compensate for the delay when starting playback.
- [Off]: when the copy time is off, the whole disc is copied if there is sufficient capacity on the target drive.
- Press ◄ to go back to [Copy Time] and select [Start Copying] with ▼.

#### Start Copying

- Press **ENTER** to start copying.
- Select [Yes] with ◀ and press ENTER to confirm.
- Press **PLAY** ► to start playing the DVD-V. Copying stops at the set time setting.
- Press **STOP** to stop copying prematurely and press **ENTER** to confirm the message that then appears.

The **PAUSE II** and **SLOW/SEARCH** ◀ ➡ functions are possible during copying. If the disc begins with a Top menu, start the corresponding titles. If playback does not begin automatically, press **PLAY** ►.

These procedures and screen shots are also recorded.

When copying a DVD-Video, it is possible that the video and audio quality are not quite the same as the original.



#### Copying titles and playlists with the copy list

HDD +RW +RW

[-RW(VR)] → [HDD] [HDD] → [-R][-R DL][-RW(V)][+R][+R DL] Titles and playlists can be put together in the required sequence in a copy list and then copied.



1 Copy Direction	Source	HDD
•	Destination	DVD

Select the copy direction.

2Copy Mode ∢	Format VIDE	b
•	Recording Mode High S	speed
	Press ENTER to	

change the settings.

#### 3 Create List 0



Create List				<b>I</b>	/IDEO	Playli	sts
	.▲ No.	Name	Date	Day	Time	Name	of title
	<b>IN 001</b>	BBC 0	25/11	FRI	10:50	BBC N	News
	≫002 	BBC 2	25/11	FRI	11:30	EGGHI	EADS
Rec time							
0:52(SP)			-				
		Pi	oper	ties			
	•	S	ort				
ENTER RETURN ®	J Tł	Thumbnail Display					
		- 01	ther \	/iew	,		

#### Copying titles and playlists

- Press FUNCTIONS, select [To Others] with ▲▼ and press ENTER to confirm.
- Select [Advanced Copy] with ▲▼ and press ENTER to confirm.
- Select the required option with ▲▼.

#### Cancel All

- All created settings and copy lists are deleted!
- Select [Yes] with ◄ [Yes] and press ENTER to confirm.

#### **1 Copy Direction**

- Select [Source] with ▶ and press ENTER to confirm.
- Select the corresponding source drive with **AV** and press **ENTER** to confirm.
- Select [Destination] with ▼ and press ENTER to confirm.
- Select the corresponding target drive with **AV** and press **ENTER** to confirm.

#### 2 Copy Mode

- Select [Format] with ► and press ENTER to confirm.
- Press ENTER to confirm [VIDEO] .
- Select [Recording Mode] with ▼ and press ENTER to confirm.
- Select the recording quality or copying speed and press **ENTER** to confirm. The High Speed copying speed can only be selected if the corresponding setting was adjusted in the [Setup] menu before recording a title.
- Press ◄ to go back to [Copy Mode] and select [Create List] with ▼.

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#### 3 Create List

Create a copy list from the existing titles or playlists.

- Select [New item] with ▶ and press ENTER to confirm.
- Title
- In the [Create List] menu, select the required title with ▲▼◀► and press ENTER to confirm. Select several titles with PAUSE II. 
   The title is copied completely into the copy list.

#### Playlists

- Press the GREEN button in the [Create List] menu.
- Select the required playlist with ▲▼ ◀► and press ENTER to confirm. Select several playlists with PAUSE II. The playlist is copied into the copylist.

SUBMENU	Properties
(S)	Table Display
Press SUB MENU in the Create List screen.	Other View
- Select the required option with $\blacktriangle \!$	

#### Properties

Shows information such as time, date or file size of the title.

#### **Table Display**

Change over to Table Display.

#### **Other View**

Change over to playlist or VIDEO view.

#### Sort HDD

The table display in the SUB MENU also offers the [Sort] option. The titles or playlists can be sorted according to No., Name, Date, Day,

### Time or Name of title.

• Select the required setting with ▲▼ and press ENTER to confirm. The setting is marked with a coloured bar.


Сору					
	[	Desti	nation Capaci	ty:	1770MB
Cancel All		No.	Size	Le. N	lame of item
1 Copy Direction	H0	01	0:12 SP (12	2%)	Terra X
HDD → DVD		02	0:11 SP ( 1	1%)	Motors
2 Copy Mode	$\checkmark$	03	0:12 SP ( 1	2%)	News
VIDEO High Speed	H9	04	0:12 SP ( 1	2%)	News
3 Create List ◀					
	•		Page 01	/01	
Start Copying			Create cop	oy lis	t.
ENTER RETURN SUB MENU	III Se	elect			

## SUB MENU



#### SUB MENU in the copy list

The inserted title/playlists can be edited in the copy list using the SUB MENU.

- Press SUB MENU.
- Select the required option with ▲▼ and press ENTER to confirm.

## Cancel All

- All items entered in the copy list are deleted.
- Select [Yes] with ◄ and press ENTER to confirm.

#### Add

- Add new items to the copy list.
- Select the required title with ▲▼ ◄► and press ENTER to confirm.

#### Delete

- Delete the selected items.
- Select [Yes] with ◀ and press **ENTER** to confirm.

#### Move

- The selected items are moved in the copy list, changing the sequence.
- Select the required item with **AV** and press **ENTER** to confirm.

2 Copy Mode VIDEO High Speed 3 Create List 1 Start Copying	Press ENTER to start copying.
ENTER RETURN	



Finalizing is to enable the disc to be played on other DVD players.

Copying in High Speed mode.

Completes in 0:04

Percent complete 24%

Copy continues

Press and hold RETURN for 3 sec to stop copying.

Press ENTER to record or play back

Plea

## Start Copying

- Select [Yes] with ◄ and press ENTER to confirm.
- Press and hold RETURN for 3 seconds to stop copying prematurely.
- HDD RAM Press ENTER to record or watch television while copying.

#### Finalize

Media apart from RAM can be finalized after copying and then played on other DVD players. After a disc has been finalized, no more recording is possible.

 R RDL-RW(V)
 R RDL Before copying, please select in the menu [Setup] 54

 [DVD Management], whether the playback should begin as a title or as a Top Menu.
 Chapters are created automatically R RW(V) (approx. every 5 min.),

 +R (approx. every 8 min), if the disc is finalized after copying.

RAM -R DL +R DL +RW A title becomes a chapter.

- Select with ◄ [Copy & Finalize] and press **ENTER** to confirm. Finalizing begins immediately after copying and finishes automatically. This procedure cannot be stopped.
- If you do not want to finalize, select [Copy Only] and press ENTER to confirm.

# When copying in High Speed Mode

**R R DL RW(V) HR HR DL** During High Speed recording, only programmes marked with **D** can be recorded. Copying cannot be started if the required memory exceeds more than 100% of the storage capacity on the target drive.

Transfer chapters when copying in High Speed Mode: yes. Transfer chapters when copying in Normal Speed Mode: no.







HDD Select the copy direction.

2 Copy Mode ◀	Format PICTURE
•	Recording Mode High Speed
	Press <b>ENTER</b> to change the settings.



2 Copy Mode			
PICTURE High Speed	$\checkmark$	03	1000004
3 Create List ◀		04	1000005
Start copying			
ENTER SUB MENU	🔳 Sel	ect	

2 Copy Mode PICTURE High Speed	Press ENTER to start copying.
3 Create List 2	
Start Copying	
ENTER RETURN	



Press ENTER to finish copying. Press RETURN to continue copying

#### Only pictures can be copied with the SD card.

HDD RAM SD + HDD RAM SD

If the source drive is also the target drive, only pictures can be copied.

#### **Copying pictures**

- Press FUNCTIONS, select [To Others] with ▲▼ and press ENTER to confirm.
- Select [Advanced Copy] with ▲▼ and press ENTER to confirm.
- Select the required option with ▲▼.

#### **1 Copy Direction**

- Select [Source] with ▶ and press ENTER to confirm.
- Select the corresponding source drive with AV and press ENTER to confirm.
- Select [Destination] with ▼ and press ENTER to confirm.
- Select the corresponding target drive with ▲▼ and press ENTER to confirm.

#### 2 Copy Mode

- Select [Format] with ▶ and press ENTER to confirm.
- Press ENTER to confirm [PICTURE] .

#### **3 Create List**

Create a copy list from the existing pictures.

- Select [New item] with ▶ and press ENTER to confirm.
- Change folder
- Select [Folder] with ▲ in the [Create List Picture ( JPEG )] menu and press ENTER to confirm.
- Press ENTER to confirm the required folder.

#### Picture J

• In the [Create List Picture ( JPEG )] menu, select the required picture with ▲▼ <> ► and press ENTER to confirm.

The pictures are copied to the copy list.

#### Copy folder M

- Select picture/folder in the copy list with ▲ and press ENTER to confirm.
- Press ENTER to confirm the folder.
- Select [New item] with ▼ [New item] and press ENTER to confirm.
- Press ENTER to confirm the required folder. The folder is copied to the copy list.

SUBMENU	Delete All	
(S)	Add	
SUB MENU in the menu list	Delete	

- · Press SUB MENU in the Create List screen.
- Select the required option with AV and press ENTER to confirm.

#### Start Copying

- to confirm.
- Select [Yes] with 

   </ a new folder.
- Press ENTER if you don't want to copy any more.
- If you want to copy more pictures, press **RETURN** and repeat steps 1 to 3.

Editing several elements  $\checkmark$ Select the desired title with ▲▼◀► and press PAUSE II. A check appears. Repeat this process to select other titles. Press PAUSE II again to clear the selection.





Copy Pictures (JPEG)

SD → HDD RAM

You can copy the entire contents of the SD card onto HDD/DVD with the function [Copy All Pictures].

- Press FUNCTIONS.
- Select [To Others] with ▲▼ and press ENTER to confirm.
- Press ENTER to confirm [Copy All Pictures].



- To change the copy target select [Copy to] with ▲▼.
- Select DVD or HDD with ◀►.
- Select [Copy] with ▼ and ◄ and press ENTER to confirm.
- To stop copying prematurely, press and hold RETURN for 3 seconds.

The copied folders are placed behind the folders already on the selected drive. The print setting DPOF is not transferred during copying. The order in which the pictures are registered in the copying list may possibly not correspond to the order in the copying target.

If you copy the pictures folder for folder or card for card, all other files in this folder will be copied as well as the picture files. However, this does not apply to sub-folders contained in the folder.

If the target folder already contains pictures, the new pictures are recorded after the existing ones.

If the target drive does not have enough capacity or the number of files/folders being copied exceeds the maximum, then the copying process is stopped prematurely.

If the copying source folder has no name, this folder may be given another name on the copying target. Give the folder a name before copying.

**Copy Video (MPEG2)** (only available when saved on the SD Card ) All videos in MPEG2 format on the SD Card are copied. You cannot use this unit to play MPEG2 videos directly from the SD Card. First copy the MPEG2 videos to DVD-RAM or HDD.

Moving pictures coded in MPEG2 format recorded with a Panasonic SD video camera, digital video camera etc. can be saved on HDD or DVD-RAM (all recordings on one day are saved as one title). Playback or recording is not possible while copying MPEG2 pictures.

The menu [Copy] appears. The copy list will be created automatically. You can change the [Copy Direction] to DVD or change the copy list.

- Confirm [Start Copying] with ENTER.
- To stop copying prematurely, press and hold **RETURN** for 3 seconds.

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# **Playlists**



RAM

HDD RAM

Use this function to edit your movies/recordings made by a recorder or camcorder. You can remove unwanted scenes (e.g. commercials) or change the sequence. You can also divide your recordings (titles) into chapters.

You can create a playlist with your favourite chapters and edit this later.











Insert a recorded disc.

- If you activated write-protection, deactivate it.
- Press FUNCTIONS.
- Select [To Others] with ▲▼ and confirm with ENTER.
- Select [Playlists] with ▲▼ and confirm with ENTER.

#### **Creating a playlist**

You can create a playlist from both source titles and source chapters.

• Select the free field [Create] with ▲▼<► and confirm with ENTER.

#### 1 Selecting a Source Title

- Select the desired source title with **◄**▶ and press **SUB MENU**.
- Confirm [Create Chapter] with ENTER. A complete source title can be inserted directly into Chapters in Playlists with ENTER.

#### 2 Creating a Source Chapter

- Select the chapter section with ENTER. The length of the chapter sections is displayed as a time entry.
- Stop playback with PAUSE II.
- Locate the position for an exact chapter marker with ◀➡.
- Select [Exit] with ▼ and confirm with ENTER.

#### 3 Inserting a chapter into the playlist

- Switch from Source Title to Source Chapter with ▼.
- Select a source chapter that you want to add to the playlist with ◀► and confirm with ENTER.
- · Select the position where the source chapter should be inserted into the Chapters in Playlists with **◄** and confirm with **ENTER**. You cannot select a position when inserting the first chapter. Repeat step 3 to add another chapter.
- Return to the Playlist View with RETURN.

You can also insert a Source Title as a chapter into the playlist.

- Select a Source Title with ▲▼ ◀► and confirm with ENTER.
- Select the position where the Source Title should be inserted in Chapters in Playlists with **◄** and confirm with **ENTER**.

Jump to the beginning/end of a title/chapter with PAUSE II and SKIP IM IMI. Locate the position for a marker with SKIP I ➡ ►, SLOW/SEARCH ◀ ►, TIME SLIP, MANUAL SKIP or You can jump between set markers with SKIP < 🍽.

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# Playlists



#### Launching the Playlists menu

- Press FUNCTIONS.
- Select [To Others] with ▲▼ and confirm with ENTER.
- Select [Playlists] with ▲▼ and confirm with ENTER.

#### Playback HDD RAM -RW(VR)

• Select a playlist with ▲▼ ◀► and start playback with ENTER.

## SUB MENU

- $(\mathbf{S})$
- Select a playlist with ▲▼◀►.
- · Press SUB MENU.



Delete

Edit

Properties

Char Create

Copy

Enter Name Change Thumbnail

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#### Delete M HDD RAM

This procedure deletes the playlist and it cannot be restored.

- The source titles are retained. • Confirm [Delete] with **ENTER**.
- Select [Delete] with 
   ■ and confirm with ENTER.

#### Properties HDD RAM -RW(VR)

Information on the playlist, such as chapter, date and time, is displayed.

• Select [Properties] with ▲▼ and confirm with ENTER.



#### Editing playlists in the SUB MENU. HDD RAM

- Select [Edit] with ▲▼ and confirm with ENTER.
- Select the desired option in the SUB MENU.

#### Create

Please read Creating a playlist.

#### Сору 🛽

• Select [Copy] with ◀ and confirm with ENTER.

#### Enter Name

Change or enter the title of the programme. If you enter a long name, it is only partially displayed.

#### Change Thumbnail

You can select any position in a title as the thumbnail for the Playlist View.

- Press PLAY ► to start playback.
- At the position to be displayed as the new thumbnail, confirm [Change] with **ENTER**. The selected thumbnail is displayed.
- Confirm [Exit] with **ENTER**. The selected thumbnail is added to the Playlist View.

Jump to the beginning/end of a title/chapter with PAUSE II and SKIP I↔ ▷. Locate the position for a marker with SKIP I↔ ▷, SLOW/SEARCH ↔ ▷, TIME SLIP, MANUAL SKIP or <▷. You can jump between set markers with SKIP I↔ ▷. Editing several elements Select the desired title with ▲▼<▷ and press PAUSE II.

A check appears. Repeat this process to select other titles. Press **PAUSE II** again to clear the selection.



# Playlists



Delete Properties

Edit

**Chapter View** 

Add Chapter

Move Chapter

**Playlist View** 

Create Chapter Combine Chapters Delete Chapter

#### Editing chapters in the SUB MENU HDD RAM

- Press FUNCTIONS.
- Select [To Others] with ▲▼ and confirm with ENTER.
- Select [Playlists] with ▲▼ and confirm with ENTER.
- Select a playlist in the Playlist View with ▲▼◀►.
- Press SUB MENU.

SUB MENU again.

confirm with ENTER.

• Select [Chapter View] with ▲▼ and confirm with ENTER.

# SUB MENU



Playlists Add	Chapter		
01 E Source Title	3BC1 8/3 V	VED Motors	Page 01/01
Source Chapte	er ===		Page 001/001
Chapters in P	avlist		Page 001/001
			-





#### Add Chapter

You can create a new chapter from the Source Title.

Select the desired chapter with ▲▼◀► and press

Select the desired option in the SUB MENU with

- Select a Source Title with ▲▼ ▲► and press ▼.
  Select a Source Chapter with ▲► and confirm with ENTER.
- Cancel the process with ▲.
- Select the position where the chapter is to be inserted with ◄► and confirm with ENTER.
- Repeat the steps to add another chapter. You can select other source titles with ▲.
- Exit the menu with **RETURN**.

#### Move Chapter

• Select the position where the chapter is to be moved with ▲▼◀► and confirm with ENTER.

#### **Create Chapter**

Divide the title into chapters. Identify the points where a new chapter is to start. The chapters can be selected later during playback with **SKIP**  $\bowtie$ **N**.

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

#### **Combine Chapters**

#### Delete Chapter

 Select [Delete] with ◄ and confirm with ENTER. The original title is not deleted when the chapter is deleted.

Playlist View: Return to Playlist View.

Jump to the beginning/end of a title/chapter with PAUSE II and SKIP IM II. Locate the position for a marker with SKIP IM II. SLOW/SEARCH II. TIME SLIP, MANUAL SKIP or II. You can jump between set markers with SKIP IM II. Editing several elements II. Select the desired title with IV II and press PAUSE II. A check appears. Repeat this process to select other titles. Press PAUSE II again to clear the selection. Flexible recording mode (FR)

|--|--|



When a Timer Recording starts, recording in FR mode is cancelled.

#### Displaying the available recording time

• Press (1) multiple times.

## FUNCTIONS / To Others

# **DV Auto Rec**

• Press FUNCTIONS







This unit cannot be controlled from a connected DV unit. The DV input of this unit is only designed for DV units. (A computer etc. cannot be displayed.) The name of the DV unit may not be displayed correctly. Some DV units do not enable proper input of the picture and sound signal. The date and time information on the tape in the DV unit is not recorded. Simultaneous recording and playback is not possible.

### Automatic detection of a Camcorder at DV IN HDD RAM

Press STOP I to cancel the recording before it has ended.



 Connect your Camcorder to the DV IN input of the DVD Recorder with a DV cable. The DVD Recorder automatically detects the Camcorder.

RAM -R -RW(V) +R +RW The unit calculates the best possible recording quality between

[HDD] Titles recorded in FR mode on the hard disk are recorded in such a way that

Select [Hour] or [Min.] with ◀► and change the recording time with ▲▼.

Select [Start] with ▲▼, ◄ and confirm with ENTER. Recording begins.

The channel and recording mode cannot be changed in **PAUSE** mode.

The title does not have to be edited when copying to the disc, or the recording mode

XP and EP. It is adjusted for the space available on the disc. This function is not available during an EXT LINK recording.

they can will fit exactly onto a 4.7 GB disc later on.

• Select the station with CH ◊ or the number buttons.

Select [To Others] with ▲▼ and confirm with ENTER. Select [Flexible Rec] with ▲▼ and confirm with ENTER.

(XP-EP) does not need to be changed.

Go back to [Set rec. time] with ◀▶.

- Select [Rec to DVD] or [Rec to HDD] with <► and confirm with ENTER.</li>
- Confirm [REC] with ENTER. Recording begins.

Not all DV units are automatically detected. In this case, copy with the function [DV Auto Rec] in the FUNCTIONS menu.

#### Recording via DV input HDD RAM -R -RW(V) +R +RW

DV means Digital Video. Digital satellite tuners and digital VHS video recorders are not compatible with this unit. The DVD recorder cannot be controlled using an external unit connected to the DV IN terminal.

The programmes (e.g. via a digital video unit) are recorded as one title. <u>HDD</u> RAM Each time the picture is interruped, a chapter is created and a playlist is automatically created.

Switch off this unit and the DV unit (e.g. digital camcorder) before you connect it to the DV terminal. If the SD drive is selected, select the DVD drive with **DRIVE SELECT**.

- In the Setup menu under Audio Mode for DV Input, select [Stereo 1/2] or [Mix].
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- Set the DV unit to Pause at the desired start position.
- Press REC MODE to select the recording mode SP, LP, EP, XP.
- Press FUNCTIONS.
- Select [To Others] with ▲▼ and confirm with ENTER.
- Select [DV Auto Rec] with ▲▼ and confirm with ENTER.
- Confirm [Rec] with **ENTER**. Recording begins.
- · Confirm the message at the end of the recording with ENTER.
- To prematurely stop the recording, press STOP 
   Confirm the message to prematurely stop the recording with ENTER or RETURN.

#### Manual recording via DV input HDD RAM -R -RW(V) +R +RW

- Start playback on your external DV unit.
- · Press Pause at the desired start position.
- Select the DV channel with INPUT SELECT.
- Select the recording mode with **REC MODE**.
- · Start playback on the external DV unit.
- End the recording on the DVD Recorder with STOP .
- · End playback on the DV unit.

Recording cannot be cancelled with PAUSE II.

## Setup



#### Setup menu overview

• Press FUNCTIONS.

**Creating new profiles** 

through the two tables.

**Profile Select** 

- Select [To Others] with ▲▼ and confirm with ENTER.
- Select [Setup] with **AV** and confirm with **ENTER**.
- Select the desired sub menu with ▲▼ and switch to setup with ▶.
- Select the desired setting with **A** and confirm with **ENTER**.
  Select the desired option with **A** and confirm with **ENTER**.

You can create four different profiles where you can put together

• Use PAGE 
to scroll backwards or forwards page for page

Follow the menu guide. The unit saves your settings.Press **RETURN** multiple times to exit the menus.

	▲▼ Tuning	►	► Edit Profiles	
--	-----------	---	-----------------	--

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# Edit Profiles All Services Profile 1 1 BBC ONE Wales 2 BBC 2W 3 BBC THREE 4 BBC FOUR 5 CBeebies 6 BBC PARLMNT 6 BBC PARLMNT Community 8 CBBC Channel 9 1Xtra BBC 9 1Xtra BBC Profile Select Add Add All

AddSelect the required station in the left table with AV.

· Use the GREEN button to select a profile.

your favourite analog and digital TV stations.

The profiles are stored in the TV Guide.

- Use the YELLOW button to accept the selected station.
- Every station can only be added to the profile once.
- Press ENTER to save the profile.

Four different profiles are available.

#### Add All

- Use the **BLUE** button to add all available stations to the profile.
- Press **ENTER** to save the profile.

#### Edit profile

- Use ► to go to the column of the selected profile.
  - Use the coloured buttons to edit the profiles.

#### **Profile Name**

• Press the **RED** button to change the profile name.

#### Move

- You can change the order of stations in the selected profile.
- Select the required station with **AV**.
- Use the GREEN button to mark the station.
- Move the station to the required position with AV.
- Press the **GREEN** button again to insert the station.
- Press **ENTER** to save the profile.

#### Delete

- Select the required station with **AV**.
- Use the YELLOW button to delete the station from the profile.
- Press ENTER to save the profile.

#### Delete All

- Use the **BLUE** button to delete all stations from the profile.
- Press ENTER to save the profile.

Edit Profiles					
All Services 1 BBC Of 2 BBC 2V 3 BBC TH 4 BBC FC 5 CBeebin 6 BBC PA 7 Commu 8 CBBC 0 9 1Xtra B	IE Wales / REE DUR es RLMNT nity Channel 3C		Profile 1 3 BBC THF 7 Commun 9 1Xtra BB 4 BBC FOL 8 CBBC CH	REE C D IR Nannel	
Profile Name	Move	Г	Delete	Delete All	
SELECT TO STORE, JUMP	PRESS ENTER			Page + ∧ Page - ∨	



Add New DVB Services							
Finish	ied	Ch 2				68	
Prog.	Channel	Service I	Vame	Net ID	TS ID	Quality	
1	47	BBC 1		12306	11398	8	
2	47	BBC 2		12306	11398	8	
2 new	v services	found.					
Ø,	enter Return						

2 BBC 2W DVB CH30 l Qual 10 CH + ▲ CH – ▼ .RETU

# Setup

#### ▲▼ Tuning Auto-Setup Restart S (ENTER

#### **Auto-Setup Restart**

- Select [Yes] with ◀ and confirm with ENTER. The station search begins.
- To cancel the process, select [No] with ▶ and confirm with ENTER or press RETURN. • Press **RETURN** to prematurely end the station search.
- Press RETURN to prematurely end the station search. All station settings and all created profiles are deleted.

▲▼ Tuning	►	▲▼ Add New DVB Services	ENTER
			חמ

#### Add New DVB Services

The unit looks for new digital stations. The station search is automatic.

The bar over the table shows you the search progress. At the end of the search, the number of found new digital stations appears.

• Press **RETURN** to stop the station search prematurely. The channels found before stopping are not saved.

▲▼ Tuning	▲▼ Signal Condition	
Signal Condition		D/3

## **Signal Condition**

The display in the [Signal Condition] menu shows the quality and strength of the selected digital station.

 You can select and check the stations consecutively with CH ◊. The Signal Quality is only displayed for digital stations.

#### **Signal Quality**

Display red: signal quality below 2: the signal quality is poor so that there may be interference in the pictures and sound.

Display orange; signal quality 2-5: the signal quality is basically adequate, but brief interference in the pictures and sound is possible in isolated cases. Display green; signal quality over 5: optimum picture and sound quality.

#### **Signal Strength**

The display for signal strength is grey. 0 means signal strength = 0 %, 10 means signal strength = 100%.

The signal strength can also be >100 % (> 10). In this case, the display is red. 74



Digital Video

Digital Vide

## Setup



▲▼ Tuning ► ▲▼ Manual

#### Entering a new television station (for analogue channels)

- Select a free station location with ▲▼▲▶ and confirm with ENTER.
- Enter the channel with  $\blacktriangle$  or  $\bigcirc 9$ .
- The channel tuning starts. Wait a moment until the desired station is set and confirm the setting with **ENTER**.

Manual	Pos	901	
Tuning	Name	BBC	
	Channel	21	
	NICAM	AUTO	
	Title Page	301	
CHANGE ENTER RETURN 0 9			
RETURN : In ENTER : sto	eave pre		

Options a	avail	able for tuning the c	hannels	
Pos				Station position in the station table.
Name	►	⇔ [A-Z, 0-9, -, +, *]	ENTER	Set the station name.
Channel	•	⇔ [21-68]	ENTER	Set the channel.
NICAM	•	⇔ [On] [Off]	ENTER	Switches NICAM on or off.
Title Page	•	<b>♣</b> [100-899]	ENTER	Select the video text page which supplies the title information.

#### Station positions

Your digital channels can be found at positions 1-900. Your analogue channels can be found at positions 901-999.

#### Changing the name of the television station

- Select the name of the television station with **AV •** and confirm with **ENTER**.
- Select [Name] with ▲▼ and the name field with ►. The cursor jumps to the first letter **EBC**.
- Change the letter with AV.
- Select the next letter with ▶, BEC.
- Press ENTER. The new name is saved in the station table.

Manual Tuning						
	Pos	Name	Ch	Pos	Name	Ch
	901	BBC 1	21	911		
	902	BBCTW	22	912		
	903			913		
	904	ITV1	51	914		
	905	ITV2	57	915		
ALLEN	906			916		
ENTER	907			917		
RETURN	908			918		
Delate	909			919		
Delete	910			920		



#### **Deleting television stations**

- Select the station that you want to delete with AV
- Press the **RED** button to delete the station. The station position settings are deleted.

▲▼ Tuning	►	▲▼ Download from TV	

Download from TV (with Q Link or similar functions for analogue channels)

- To cancel the procedure, use to select [No] and confirm with ENTER or press RETURN.
- To prematurely end the data transfer, press RETURN.

# Setup

Setup	Settings for Playback					
	Ratings	Level 8				
Tunina	DVD-Audio Video mode Playback	Off				
Disc	Soundtrack	English				
Picture	Subtitle	Automatic				
Sound	Menus	English				
Display	SFLECT -					
Connection						
Others	ENTER-					

AV Disc > AV	Settings for Playback	▲▼ Option	ENTER)			
Ratings		[8] [1-7] [0]				
You can restrict the playback of DVD-Video after entering a password. 8 Allows all titles. 1-7 Prevents the playback of DVD-Video with the registered security levels. 0 Blocks all titles.						
Changing the security level         Unlock Recorder       Return to level 8         Change Password       Change the password         Change Level       Change the authorisation level         Temporary Unlock       You can temporarily authorise a disc for playback.						
DVD-Audio Video n	node Playback	[On] [Off]				
<b>On</b> : You want to play switch off the unit, the	DVD-Video content from a DVI e setting is reset to [Off].	D-Audio. If you change t	he disc or			
Soundtrack Subtit	le Menus DVD-V					

Select the language for audio, subtitles and disc menus. Under [Other], enter the language code for another language.

 
 Setup
 Settings for Recording Recording time in EP mode
 EP(8Hours)

 Tuning
 Rec for High Speed Copy
 Off

 Disc
 DVD Speed for High Speed Copy
 Maximum

 Picture
 Sound
 SELECT

 Sound
 SELECT
 ENTER

 Others
 RETURN
 RETURN

▲▼ Disc ► ▲▼ Settings for Recording Comparison	▲▼ Option				
Recording time in EP mode	[EP ( 6Hours )] [EP ( 8Hours )]				
Select the maximum number of hours for recording in EP mode. <b>EP ( 6Hours )</b> : Recording time on a 4.7 GB disc. <b>EP ( 8Hours )</b> : Recording time on a 4.7 GB disc. The sound quality is lower.					
Rec for High Speed Copy [On] [Off]					
On: Enables copying from HDD to a DVD-R, -R DL, +R DL, DVD-RW(V) (DVD-Video format), +RW oder +R in high-speed mode. Titles are saved in 4:3 format. When recording a dual channel sound programme, only the main or only the secondary sound can be recorded. Select the audio type you want to copy under [Bilingual Audio Selection]. 16:9 format programmes (wide picture) are also recorded in 4:3 format.					
DVD Speed for High Speed Copy [Maximum] [Normal (Silent)]					
When using high-speed compatible DVD-RAM 5x, DVD-R-, +R 8x or +RW 4x discs. In the [Normal (Silent)] setting, this unit generates less noise than in the [Maximum] setting. The time required for copying is doubled.					

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# Setup

 -		

Setup	Comb Filter	Off
	Still Mode	Automatic
Tuning	Seamless Play	On
Disc		
Picture		
Sound		
Display	TAD SEL	.ECT
Connection		
Others	RETU	RN

▲ Picture ►	Setting	ENTER		Option	ENTER		
Comb Filter			[On] [C	)ff]			
<b>On</b> : The picture is clear and contour-rich. The setting is always set to [On] if you selected [TV System - NTSC]. <b>Off</b> : If the picture to be recorded is distorted.							
Still Mode			[Auton	natic] [Field] [	Frame]		
Select how the still picture should be displayed. <b>Field</b> : Select this function if the picture is distorted with the setting [Automatic]. <b>Frame</b> : Select this function if small text or line structures are not displayed clearly with the setting [Automatic].							
Every full picture consists of two half pictures. Distortions are possible in a full picture, but as a rule the picture quality is better than in the half picture. The half picture appears to be coarse-grained but is not distorted.							
Seamless Play		RAM -RW(VR)	[On] [(	Off]			
Seamless playback o On: The chapter in a contains the same au The position of the ch Off: The boundaries of may freeze for a shor	f a chapter in a pl playlist are playba dio types. This fun apter segments n of the chapters in t period of time.	aylist. ack seamless nction is not p nay change s the playlist ar	ly. This i bossible lightly. re follow	s only poss with Quick ` ed exactly, !	ible if the playlist View. but the picture		

# Setup



Setup	Dynamic Range Compression	Off					
	Bilingual Audio Selection	M1					
Tunina	Digital Audio Output						
Disc	Audio Mode for XP Recording	Dolby Digital					
Picture	Audio Mode for DV Input	Stereo 1					
Sound							
Display							
Connection	SELECT						
Others	ENTER STATE	TURN					
•		[					
Setup	Digital Audio Output						
	PCM Down Conversion	Off					
Tuning	Dolby Digital	Bitstream					
Disa	DTO	D'1 1					

	PCM Down Conversion	Off						
Tuning	Dolby Digital	Bitstream						
Disc	DTS	Bitstream						
Picture	MPEG	PCM						
Sound								
Display	Dolby Digital							
Connection	Doiby Dig	itai						
Others	Bitstream							
	PCM							
	SELECT							
	DETLIDA							

▲▼ Sound ►	· <b>▲</b> ▼ Se	etting 🤇	ENTER	▲▼ Optio	on	ENTER			
Dynamic Range Compression         DVD-V         [On] [Off] (Dolby Digital Only)									
<b>On</b> : The level of qui decreases. The auc	eter passa lio can be c	ges increase clearly unders	s and the stood eve	e level of loud on when the v	er passages olume is low	vered.			
Bilingual Audio Se	lection -R -I	R DL -RW(V) +R +	R DL +RW	[M 1] [M 2]					
If you want to record programmes that are broadcast in dual-channel sound, you can select between the original language [M1] or another available language [M2]. If you are copying from an external source or from a tape position, select the sound track on the other unit.									
Digital Audio Out	put			[PCM Down [Dolby Digita	Conversion] al] [DTS] [MPE	G]			
Select the appropria	ate setting i JT of the D	if you have co VD Recorder	onnected	an external u	unit to the				
PCM Down Conve	rsion			[On] [Off]					
setting, signals are 96 kHz or 88.2 kHz <b>On</b> : The connected 88.2 kHz. Signals a <b>Off</b> : The connected kHz. Signals are ou	converted t or if the dis unit canno re converte unit can pr tput as 96	to 48 kHz or sc is copy-pro t process sig ed with 48 kH rocess signal kHz or 88.2 k	44.1 kHz otected. nals with z or 44.1 s with a s kHz.	if they have a a scan frequ kHz. scan frequenc	a scan freque ency of 96 k sy of 96 kHz	ency over Hz or or 88.2			
Dolby Digital, DTS	, MPEG			[Bitstream] [	PCM]				
Bitstream: The con PCM: If the connect changed to [PCM]. loudspeaker. Make	nected unit ed unit car Otherwise, the necess	t can decode inot decode t the loud nois ary changes	the corres he corres se can lea dependir	esponding sig sponding sigr ad to damage ng on your au	nal. lal, the settir to your hea dio system.	ng must be ring or			
Audio Mode for XI	P Recordin	ıg		[Dolby Digita	I] [LPCM]				
Choosing the audi recordings may po	o type whe ssibly be p	en recording	in XP m normal re	ode. The pic ecordings in	ture quality XP mode	of LPCM			
Audio Mode for D	/ Input	-R -R DL -f +R	RW(V) +R R DL +RW	[Stereo 1] [St	ereo 2] [Mix]				
Select the audio typ Stereo 1: Original s	e when co ound; <b>Ster</b>	pying from th <b>eo 2</b> : Voice-c	e DV inp over, <b>Mix</b> :	ut. Original sou	nd + voice-o	ver			
		~ ~ ~							
▲▼ Display ► ▲	Setting	ENTER	▲▼ Opti	on		(ENTER)			

DVB Preferred Subtitles	English
On-Screen Messages	5 sec.
Grey Background	On
FL Display	Bright
New Service Message	Automatic
TAB	
RETURN	
	DVB Preferred Subtitles On-Screen Messages Grey Background FL Display New Service Message

DVB Preferred Subtitle	[English] [Welsh] [Gaelic]					
Subtitle language for digital programmes (standar	d or for the hard-of-hearing).					
On-Screen Messages	[Off] [3 sec.] [5 sec.] [7 sec.] [10 sec.]					
Select the time for screen displays. Off: The screens are not shown on changing the station.						
Grey Background	[On] [Off]					
On: The grey background is displayed when there	e is no analogue TV reception.					
FL Display	[Bright] [Dim]					
Changes the brightness of the display on the unit.						
New Service Messages	[Automatic] [Off]					
Off: The Service Messages are not shown.						

# Setup



Setup	TV Aspect	16:9		
	Progressive	Off		
Tuning	TV System	PAL		
Disc	HDMI Settings			
Picture	AV1 Output ( Scart )	Video		
Sound	AV2 Settings			
Display	, , , , , , , , , , , , , , , , , , ,			
Connection	CELECT TAB			
Others				
	ENTER - V RETU	JKN		

▲▼ Connection ►	▲▼ Setting	ENTER	▲▼ Option	ENTER				
TV Aspect			[16:9] [4:3] [Letter	box]				
Select the TV screen in 4:3 format. 16:9 for Letterbox: Black bars	format of your tele rmat is used to reco s appear on the up	vision. Prog ord to RAM. per and low	rammes in 16:9 fo er edges of the scr	rmat are recorded reen (16:9).				
Progressive		[On] [Off]	61					
<b>On</b> : The signal is disp	played in full-picture	e quality usi	ng COMPONENT	VIDEO OUT.				
TV System			[PAL] [NTSC]					
<b>PAL</b> : You connect the unit to a PAL or multi-system television. Programmes that were recorded with NTSC are played as PAL60. <b>NTSC</b> : You connect the unit to an NTSC television. Programmes that were recorded with NTSC are played as NTSC.								
HDMI Settings				51				
HDMI (High Definition Multimedia Interface) is a digital interface for Audio and Video. One single cable transfers both digital video data (picture data) and also digital audio data. HDMI is the world's first complete digital consumer AV interface complying with a non-compression standard.								
AV1 Output ( Scart )			[Video ( with com [S Video ( with co [RGB 1 ( without c [RGB 2 ( without c	oonent )] nponent )] omponent )] omponent )]				
<ul> <li>Video ( with component ): If RGB 1 or 2 is set, there is no signal available on COMPONENT VIDEO OUT. [Video ( with component )] is switched on automatically if the unit is connected via HDMI.</li> <li>S Video ( with component ): Select when a TV is connected that can receive an S Video signal.</li> <li>RGB 1 ( without component ): RGB output is available all the time while this unit is on.</li> </ul>								
RGB 2 ( without component ): RGB output is available only during playback or on-								

screen display.

Setup	AV2 S	ettings		
	AV2 In	put		RGB / Video
Tuning	Ext Lin	k		Ext Link 2
Disc				
Picture				
Sound				
Display			A\/2.lp	put
Connection			AVZ III	put
Others			RGB / \	/ideo
			RGB	
			Video	
			S Video	)
	SELEO			

RETURN

	AV2 Input	Perform the settings in the following submenus for the				
AV2 Settings	Ext Link	connected unit.				
AV2 Input [RGB / Video] [RGB] [Video]						
<b>RGB</b> / <b>Video</b> : When receiving or recording RGB output from external equipment (not NTSC) <b>RGB, Video, S Video</b> : The input is switched to the selected signal (S Video/not NTSC)						
Ext Link [Ext Link1] [Ext Link 2]						
Setting for external units (EXT LINK) You control the recording function via an external unit (e.g. a receiver) with EXT LINK. Connect the unit to the AV2 terminal with a 21-pin Scart cable.						
<b>Ext Link 1</b> : For digital receivers that send a special recording control signal, e.g. the EU.N. receiver (TU-DSF41).						
<b>Ext Link 2</b> : External recording control for satellite or digital receivers (video signal). The Ext Link 2 setting cannot be used if the input signal is in NTSC format.						
If the television is connect	ed to the AV1 terminal via	the 21-pin Scart cable, the				

recorded picture appears on the screen. The beginning of the recording may not be recorded correctly.

#### TV Aspect 16:9 Setup Off Progressive TV System PAL Tuning Disc HDMI Settings Picture AV1 Output ( Scart ) Video Sound Display AV2 Settings HDMI Video Format Automati Connection Aspect for 4:3 Video 4:3 Others Digital Audio Output HDMI/Opti Control with HDMI / Q Link HDMI/Q Li



Setup					
▲▼ HDMI ►	▲▼ Setting			Option	ENTER
HDMI Video Format		[5	76i/480i]	[576p/480p][72	20p][1080i][Automatic]
Select the screen resol <b>Automatic</b> : Automatica not satisfied with the pi improvement. You can only select the	ution of your co ally selects the cture quality, a settings suppo	onnected te setting belo change in t orted by the	elevisior onging t the sett	n set. o the connec ing may pos cted unit.	cted unit. If you are sibly result in an
Aspect for 4:3 Video			[4:3	6] [16:9]	
16:9: Picture is output a	as 16:9 aspect	with side p	anels.	OMI and Optica	I] [Optical Only]
IDMI and Optical: Bo Dptical Only: Only the	th outputs are a optical output	activated wi	ith one I with or	signal. ne signal.	
Control with HDMI / G	) Link		(HD	MI and Q Link	] [Q Link Only]
HDMI and Q Link: Sim setting if you have con	nultaneous inter nected a unit vi	action of H a HDMI.	DMI an	d Q Link fun	ctions. Select this
<b>Q Link Only</b> : If your TV the link. Select the screen resol	/ set is equippe lution of your co	ed with the	Q Link	function, sele	ect this setting for
	HDMI a	nd Q Link	only Q	Link (via AV1)	only HDMI
Easy Playback		$\checkmark$		$\checkmark$	~

	HDMI and Q Link	only Q LINK (VIA AV I)	
Easy Playback	~	~	~
Direct TV recording	✔ (not via HDMI)	~	
Power on link	~	~	√
Power off link	~	~	~
Download from TV	✔ (not via HDMI)	~	

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

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Setup	Remote Control DVD 1			DVD 1
	Cloc	:k		
Tunina	Owner ID			
Disc	System Update			
Picture	Initialize			
Sound				
Display		Re	emote C	ontrol
Connection			DVD 1	
Others			DVD 2	
			DVD 3	
		SELECT	TIRN	







# Setup

	Owner	r ID
	PIN number	* * * *
	Name	
	House No	
~	Postcode	
•		
RETURN		
	RETURN: le	ave

▲▼ Others ►	▲▼ Owner ID		Option	ENTER
Owner ID				
<ul> <li>To set the PIN nur Press AV &lt;&gt; to co</li> <li>Make sure that yo</li> <li>Press the ENTER</li> <li>Select [Yes] with &lt;</li> <li>Press &gt;. Enter the</li> <li>AV &lt;&gt;.</li> <li>Press the ENTER</li> <li>Press the RETUR</li> </ul>	mber press ►. Us orrect the digit. bu will remember t button to confirm and confirm with [Name], [House button to confirm N button to leave	e <sup>[]</sup> — <sup>[]</sup> to ente the PIN number h <b>ENTER</b> . No] and [Postco n each entry. the Owner ID s	er a four-digit PII (make a note o ode] in the same creen.	N number. f it). e way, using

To display the Owner ID information on TV
 On the unit press STOP for more than 5 seconds. The PIN number is not displayed. After 30 seconds this menu automatically disappears.

Setun	System Update	
oetup	EPG Download in Standby	On
	Software Update in Standby	On
Tuning	Software Update Search Now	
Disc		
Picture		
Sound		
Display		
Connection	SELECT	
Others		
	RETURN	

System Update				
A new software has been found. Update your software ?				
Yes No				
Initialize				
Shipping Condition				
Default Settings				

System Update	Digital Video Broadcaxting
EPG Download im Standby-Modus	[On] [Off]
<b>On:</b> EPG data are loaded in standby mode.	
Software Update in Standby	[On] [Off]
The software is automatically updated when the uni shown in the unit display. If the unit is in standby to recordings are not affected. If you want to prevent to setting [Software Update in Standby - Off].	t is in standby mode. This is record, the timer-controlled he automatic updates, select the
Software Update Search Now	
Start the search for new software manually. A new software version is announced by a message the update. This could result in the loss of data. A m finished. If a new software version is not going to be corresponding message also appears.	e. Do not switch your unit off during nessage shows that the update has e broadcast until the next few days, a
Initialize	[Shipping Condition] [Default Settings]
<b>Shipping Condition</b> : All settings, except for the set password and the time settings and the owner ID, a	curity levels with the associated re reset to the factory-default settings.
<b>Default Settings</b> : All settings, except for the progra language settings, the security levels including pass and the owner ID, are reset to the factory-default se	mmed channels, time and disc- sword and the remote control code ttlings.







#### • Press FUNCTIONS.

- Select [To Others] with ▲▼ and confirm with ENTER.
- Select [HDD Management] with ▲▼ and confirm with ENTER.
- Select the desired menu with ▲▼ and confirm with ENTER.
- Return to the FUNCTIONS menu with **FUNCTIONS**.

#### **Delete all Titles**

- Confirm [Delete all Titles] with ENTER.
- In the next screen, select [Yes] with ◀ and confirm with ENTER.
- In the security question, select [Start] with ◄ and confirm with ENTER. All titles and playlists are deleted and cannot be restored. Protected titles cannot be deleted.

#### Format HDD

- The formatting process deletes all data from the HDD.
- Select [Yes] with ◀ and confirm with ENTER.
- Select [Start] with ◄ and confirm with ENTER. The formatting process begins. A message appears upon completion.
- Press ENTER.

# FUNCTIONS / To Others







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

# **DVD Management**

If you activated write-protection, deactivate it. RAM

- Press FUNCTIONS.
- Select [To Others] with ▲▼ and confirm with ENTER.
- Select [DVD Management] with ▲▼ and confirm with ENTER.
- Select the desired menu with ▲▼ and confirm with ENTER.
- Return to the FUNCTIONS menu with **FUNCTIONS**.

#### Disc Name

• Enter the name. The name is displayed in the DVD Management menu. You cannot name a disc after it has been finalized.

#### Disc Protection RAM

- This procedure makes it possible to activate or deactivate write-protection.
- Select [Yes] with ◄ and confirm with ENTER. Disc Protection On: The padlock is closed.
- To deactivate write-protection, select [Yes] with ◀ and confirm with ENTER. Disc Protection Off: The padlock is opened.

#### Delete all Titles RAM

- Confirm [Delete all Titles] with ENTER.
- In the next screen, select [Yes] with 
   ■ and confirm with ENTER.
- In the security question, select [Start] with ◄ and confirm with ENTER. All titles and playlists are deleted and cannot be restored. If the discs or one or more titles are protected, the disc cannot be deleted.

 Format Disc
 RAM
 -RW(V)
 +RW
 -RW(VR)
 +R
 +R DL
 Only for new discs

 Some discs are not formatted. They must be formatted before they can be used in this unit. The formatting process deletes all data from the disc. The estimated duration of the formatting process is displayed in the menu.
 Image: Comparison of the formatting process is displayed in the menu.

- Select [Start] with ◀ and confirm with **ENTER**. The formatting process begins. A message appears upon completion.
- Press ENTER.

Formatting can be cancelled and restarted. The formatting process deletes all data, including the recordings created with this unit.



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DVD Management Ø DVD-R DL	Titles 2 Remain Used 0:53	3:47(SP)
	Disc Name	4
	Auto-Play Select	Top Menu
	Finalize	
SELECT ENTER RETURN		

#### Top Menu -R -RW(V) +R -R DL +R DL +RW

Before finalizing the disc, you can choose between 9 different colour samples to appear in the disc menu.

• Select the corresponding menu sample between 1 - 9 with ▲▼ and press ENTER to confirm.

#### Auto-Play Select -R -RW(V) +R -R DL +R DL +RW

Before finalization, you can select whether playback should start from the beginning of the disc or whether it should be lauched from a disc menu.

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



## Finalize -R -RW(V) +R -R DL +R DL

The discs become DVD-Videos in DVD-Video format through finalization. They can be played on all DVD Players that support DVD-Video format.

- Select [Yes] with ◀ and confirm with ENTER.
- Press ENTER.

You can only finalize DVDs that were recorded on this unit. You can no longer record to DVDs that have already been finalized. A finalized DVD-RW(V) can be recorded again after it is reformatted.

DVD Management O + RW	Title Useo	2   Remain 1 0:04	1:52(SP)
		Disc Name	4
		Auto-Play Select	Top Menu
		Create Top Menu	
SELECT ENTER RETURN		Format Disc	

#### Create Top Menu +RW

With a +RW, you have the option of creating a Top Menu. The Top Menu created can be used for playback on another DVD-Player.

- Select [Create Top Menu] with ▲▼ and confirm with ENTER.
- Select [Start] with ◀ and confirm with ENTER. The Top Menu is created. The procedure concludes with the message: Top Menu was created. Return to DVD Management with ENTER.

## FUNCTIONS / To Others

Format Card

Format Card

All folders and files will be

completly deleted

Start formatting ?

SD Card

No

Selected drive

Yes

# Card Management



#### Format card

43 MB

Remain

Formatting deletes all data on the SD card.

If you have activated the write-protection function, deactivate it.

- Press FUNCTIONS.
- Select [To Others] with ▲▼ and press ENTER to confirm.
- Select [Card Management] with ▲▼ and press ENTER to confirm.
- Select [Format Card] with ▲▼ and press ENTER to confirm.
- Select [Yes] with ◀ and press ENTER to confirm.
- In the confirmation prompt, select [Start] with ◀ and press **ENTER** to confirm. Formatting begins. A message appears when it has finished.
- Press ENTER to confirm.
- · Press FUNCTIONS to return to the FUNCTIONS menu.

DISPLAY menus contain information on the disc or the unit. With DVD-Videos, you can use the repeat function, change subtitles and the angle, change the picture and sound settings for DVD playback. Depending on the status of the unit (playback, STOP), there are some entries that cannot be selected or changed.



Subtitles, sound track and recording angle can only be selected if they were recorded on the disc. For some discs, they can only be changed via the disc menus. When bilingual recordings are played back, "1+1 ch" is displayed.

▲▼ Disc ►	▲▼ Option ►	▲ Setting			
	Soundtrack	Soundtrack lang.	DVD-A DVD-V Select the sound and the	language.	
		Sound properties	RAM -R -R DL -RW(V) +R +R The disc sound propertie LPCM/PPCm/Dolby Digit number of channels, k (kh	DL [+RW]-RW(VR) s are displayed. al, DTS and MPEG: signa tz): scan frequency, b (bit):	l type, ch (channel): number of bits
			Select the audio channel		
	Subtitle	[On] [Off]	DVD-A       DVD-V         Switch subtitles on or off,         RAMRR DLRW(V) +R +R         Only for discs with the SL cannot be recorded with the SL canno	select the language. DL +RW -RW(VR) ubtitle On/Off setting. The this unit. select the number of the	Subtitle On/Off setting subtitle.
		Language	ENG: English FRA: French DEU: German ITA: Italian ESP: Spanish NLD: Dutch SVE: Swedish NOR: Norwegian * Others: Enter the appro	DAN: Danish POR: Portuguese RUS: Russian JPN : Japanese CHI : Chinese KOR: Korean MAL: Malay VIE : Vietnamese	THA : Thai POL : Polish CES : Czech SLK : Slovak HUN: Hungarian FIN : Finnish * : Others
	Audio Channel	L+R/L/R	RAM -RW(VR) VCD		
			Change audio during play	yback.	
	Angle		DVD-A DVD-V Select another recording	angle.	
	Still Picture	[Slide Show] [Page]	DVD-A Select the still image play Disc playback in the origi Select the still image nun RANDOM: Playback in ra Return to the standard pa	yback type. nal sequence. nber and playback. andom order. age: Select [Return] and p	ress ENTER.
	PBC		VCD PBC shows whether the n	nenu playback control is or	n/off.

# Picture and sound setting during playback

▲▼ Play ►	▲▼ Option ►	▲▼ Setting	
	Repeat Play	[On] [Off]	The function is only available if the elapsed time is displayed.
			CD VCD ▶ Track ↔ All ↔ Off ◄
			RAM -R -R DL -RW(V) +R +R DL +RW DVD-V -RW(VR) ► Title ↔ Chapter ↔ Off ◄
			DVD-A] MP3 ► Track ↔ Group ↔ Off ◄
			During playback of a playlist     RAM _RW(VR)       ► PL (Playlists)     ↔ Off ◄
			If the Video-CD has playback control, select a track in <b>STOP</b> mode with the number buttons.

▲▼ Picture ►	▲ Option ►	▲▼ Setting	
	Playback NR	[On] [Off]	Reduces screen interference.
	Progressive	[On] [Off]	Select [On] to activate full picture output.
	Transfer.	[Progressive - On]	<ul> <li>Select the appropriate conversion method for full-picture output.</li> <li>PAL output signal <ul> <li>[Auto] Film and video content is detected and converted appropriately.</li> <li>[Video] If problems occur with the [Auto] setting.</li> <li>[Film] Select Video or Film if the video content is is not displayed correct with the Auto setting.</li> </ul> </li> <li>NTSC output signal <ul> <li>[Auto 1] Film and video content is detected and converted appropriately.</li> <li>[Auto 1] Film and video content is detected and converted appropriately.</li> <li>[Auto 2] Movies with different picture frequencies are converted</li> <li>[Video] If content does not display correct with the [Auto 1] or [Auto 2] settings.</li> </ul> </li> </ul>
	AV-in NR	[Automatic] [On] [Off]	Reduces noise during tape recording. Only for AV1, AV2, AV3 or DV. Only with picture input from a video cassette. Noise reduction is activated for video input. The input signal can be recorded unchanged.

▲▼ Sound ►	▲▼ Option ►	▲ Setting	
	DVB Multi Audio	[Other 1] [Other 2]	If more than one audio channel is broadcast, you can set the desired channel here (only applies to digital channels).
	V.S.S.		RAM -R -R DL -RW(V) +R +R DL +RW DVD-A DVD-V -RW(VR)
		[Natural] [Emphasis] [Off]	Surround sound effect with 2 front speakers. Only with Dolby Digital with 2 or more channels. Switch off V.S.S. if this causes problems. V.S.S. does not work with recordings in dual-channel sound.
	Dialog Enhancer		RAM -R -R DL -RW(V) +R +R DL +RW DVD-A DVD-V -RW(VR)
		[On] [Off]	Dolby Digital, only with 3 or more channels, including a center channel. The volume is increased so that dialogue is easier to understand.

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



The HDMI connection can be used only with units that are suited for HDMI.



# HDMI (High Definition Multimedia Interface)

If you connect the DVD Recorder to an HDMI-compatible unit, just one cable transfers a high quality digital audio and video signal without interference.

 Once an HDAVI Control-compatible unit has been connected to the HDMI terminal, switch the units on and switch on the external unit, select the input channel for the DVD Recorder. Repeat the procedure if there is any change to the HDMI terminal.

The audio signal cannot be transmitted via HDMI if an externally connected unit does not support CPPM (Content Protection for Prerecorded Media), or when playing a DVD audio with copy protection. In this case, use an audio cable.

If an connected TV only supports dual-channel audio, then an audio signal with 3 or more channels is down-converted, with output through 2 audio channels. It is not always possible to down-convert all discs.

Titles where down-converting is not possible can only be reproduced via HDMI through an amplifier which corresponds to the HDMI Ver. 1.1 standard or higher and is CPPM compatible.

For HDCP (High-Bandwidth Digital Content Protection) compatible units with DVI connection (e.g. PC monitors): depending on the unit, it is possible that a DVI/HDMI adapter does not reproduce the video signal perfectly. The audio signal is not transmitted in this case.

#### Control via Q Link and HDMI (HDAVI Control)

	Automatic input changeover (Easy Playback) If you start the playback function or select a menu (e.g. Direct Navigator, Timer Recording), the TV automatically switches to the input channel for the DVD Recorder. If you are recording on the DVD drive, the TV does not automatically change to the input channel.
Elink	<b>Direct TV recording</b> Press <b>DIRECT TV REC</b> to directly record the programme you are currently watching. You do not need to enter anything else.
Qlink HƏMI	<b>Power on link</b> If you start the playback function or e.g. select the menu Direct Navigator or Timer Recording or by inserting a disc, the television set switches on and automatically selects the input channel for the DVD Recorder. If you are recording on the DVD drive, the TV does not automatically change to the input channel.
	TV/DVD automatic switch-on If the TV set and DVD Recorder are switched off (in standby), both units are switched on automatically by pressing PLAY, DIRECT NAVIGATOR, GUIDE, VIDEO Plus+ or PROG/CHECK.
Runk Homi	Power off link If the television set is switched off, this unit automatically switches off as well. The unit also switches off while the menu FUNCTIONS, DISPLAY or status messages are being displayed, and even when a Timer-controlled recording has been programmed or during playback. The unit does not switch off during a recording with the ● REC button, the Copying function or while a disc is being finalized.
Runk	<b>Download from TV</b> (analogue channels only) Station transfer from television set. During [data transfer from TV], data for the station list are automatically downloaded from the TV set. The stations are stored in the same presets of the DVD Recorder as on your TV set.
	This unit allows for Timer Recordings using the programming function of the television (e.g. IDTV).

If you connect this unit with an HDMI cable to a Panasonic television set with HDAVI control function, then both units can be controlled. If you connect this unit with an fully wired 21 pin scart cable you can use the Q Link functions to control the television and this unit. You can use both kinds of connection at the same time.

Settings for control with HDMI and Q Link: 51

The following systems from other manufacturers have similar function to Q Link from Panasonic.

- Easy Link (Trademark of Philips)

- SMARTLINK (Trademark of Sony)

- DATA LOGIC (Trademark of Metz)

- Megalogic (Trademark of Grundig)

For details, refer to your television's operating instructions or consult your dealer.

A TV takes a certain time to change over the input channel for the DVD Recorder automatically. It is therefore possible that the television set does not display the playback at the start of the title. Press SKIP I≪I I or SLOW/SEARCH ≪INF to return to the start of the playback.

The terminals can be used for INTERLACE or PROGRESSIVE output and deliver a clearer picture than the S VIDEO OUT terminal. The Q Link functions are not available with this kind of connection.



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



Connect the COMPONENT VIDEO OUT terminals of the unit with the COMPONENT VIDEO IN of the TV unit. Use a video cable. Always connect terminals with the same colour. Connect the audio cables to the corresponding audio input terminals on the TV.

4 Connect the DVD Recorder and the television to the household mains socket.

After completing the above connections, proceed to the Auto-Setup to tune in TV channels.



TV Aspect

Progressive

TV System

HDMI Settings

AV1 Output

AV2 S

Setup

Tuning

Picture Sound

Display

Others

Connection

Disc

16:9

On

PAL

RGB 1

AV1 Output

Video ( with component )

S Video ( with component )

RGB 1 ( without component ) RGB 2 ( without component ) RGB output is available all the time while this unit is on.

# **Connection to COMPONENT VIDEO terminal**

#### **COMPONENT VIDEO OUT terminal**

The terminals can be used for INTERLACE or PROGRESSIVE output and deliver a clearer picture than the S VIDEO OUT terminal. Connections via these terminals output the colour difference signals ( $P_B/P_R$ ) and the brightness signal (Y) separately. Colours can be reproduced true to the original colour. The properties of the COMPONENT VIDEO input terminal are dependent on the TV or screen.

#### Connecting a TV with COMPONENT VIDEO input terminals

If your TV with LCD or plasma screen supports the progressive process, connect it to the COMPONENT VIDEO OUT terminals.

If you want to enjoy full progressive video, set Progressive to [On].

If the AV1 Output setting in the Setup menu is set to [RGB 1/2 ( without component )], there is no output to the COMPONENT VIDEO OUT terminals. Set this option to [Video ( with component )]. 50 If the unit is connected to the TV via the S VIDEO OUT or the AV1 terminal, output

If the unit is connected to the TV via the S VIDEO OUT or the AV1 terminal, output is Interlace regardless of the settings.

Setup	TV Aspect	16:9
	Progressive	On
Tuning	TV System	PAL
Disc	HDMI Settings	
Picture	AV1 Output	Video
Sound	AV/2 Sottings	
Display	Avz Settings	
Connection		
Others		

#### • Press FUNCTIONS.

- Select [To Others] with ▲▼ and confirm with ENTER.
- Select [Setup] with ▲▼ and confirm with ENTER.
- Select [Connection] with ▲▼, [Progressive] with ▶, ▲▼ and confirm with ENTER.
- Select the option [On] with ▲▼ and confirm with ENTER.

#### Progressive television picture

The progressive picture aspect ratio (height to width) is set to 16:9. DVD-Video with a picture aspect ratio of 16:9 is properly displayed. However, video material with an image page ratio of 4:3 is shown stretched from right to left. If it is possible to adjust the picture aspect ratio on your television, select the setting [Progressive - On].

#### Progressive-compatible televisions (PAL)

To use progressive output select in the setup menu [Progressive - ON] for component output, or [576p or 720p] for HDMI output. This may cause flickering of TV Guide, information banner or subtitles display on some televisions (CRT, LCD or plasma).

In this case change progressive mode to OFF for component output, or select 576i or 1080i video format for HDMI output.

# Additional connections

You can use this frequently used standard connection with the provided accessories (Video cable).

Depending on the television, the connection with the S VIDEO cable results in a higher quality picture than the connection with an Audio/Video cable.

The Q Link functions are not available with this kind of connection.

# Connection with Video cable or S Video cable

- Connect the aerial to RF IN (Aerial input) of the DVD Recorder.
- Connect RF OUT (Aerial output) of the DVD Recorder with the aerial input of the TV.
- Connect the AUDIO OUT (L-white/R-red) of the DVD Recorder with the audio of 3 the television. Connect the VIDEO OUT or S VIDEO OUT of the DVD Recorder with the input

of the television.

4 Connect the DVD Recorder and the television to the household mains socket.

After completing the above connections, proceed to the Auto-Setup to tune in [ 9 TV channels. 50

If the unit is connected via S Video output, select the setting S Video ( with component )] in the setup menu under [Connection] - [AV1 Output] .



To watch satellite broadcasts (Set top box)

To play games (Game equipment)

Control with HDMI (HDAVI)

Q Link

This connections can be done in addition to the basic connection (page 8 + 10). The diagrams shows our recommendation for how to connect the DVD Recorder to your various equipment. For this and other connections consult the instructions of each piece of equipment.



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## **Additional connections**

#### Using a fully wired 21-pin Scart cable (not included) 59

You can use a variety of Q Link functions by connecting the unit to a Q Link compatible television. You can enjoy high-quality viewing by connecting the unit to an RGB compatible television.

The RF cable cannot be used for showing pictures from the DVD Recorder. The unit must be connected by another means e.g. Scart cable to show pictures from the DVD Recorder on the television set.



# Informations

**Recording informations** 

#### Recording a 90 minute title to a disc with 4.7 GB of storage space.

It is not possible to record a 90 minute title in XP mode.

The available storage space is used optimally in FR mode. The title is recorded in the best possible quality.

#### Discs suitable for recording

Rewr	itable		Writable			
RAM	-RW	+RW	-R	+R	-R DL	+R DL
x2	x1	x2.4	x1	x2.4	x4	x2.4
x3	x2	x4	x4	x4		
x5	x4	x8*	x8	x8		
	x6		x16	x16		

\* Playback only

Under certain circumstances, digital sound signals may not be recorded in their original format. Digital programmes limited to "onetime recording" can only be recorded to 12 cm DVD-RAM.

Titles in PAL or NTSC format can be displayed on the following TV sets:

TV-typ	Disc	Yes/No	
Multi ovotom T\/	PAL	Yes	
wull system iv	NTSC	Yes	
NTSC-TV	PAL	No	
	NTSC	Yes	
	PAL	Yes	
PAL-IV	NTSC	Yes (PAL60)	

Switching to AV input on your Panasonic

Switches between TV reception and AV

input each time the button is pressed.

# Free storage space SP LP Max. 120 min.

Max. 60 min.

XF

Max. 240 min.

EP(6 hours) Max. 360 min.





Rec mode FR: 43

#### Approximate recording times in hours

	HDD	HDD	DVD	-RAM	DVD-R	DVD-R	DL /+R DL
	(160 GB)	(250 GB)	(4.7 GB)	(9.4 GB)	(4.7 GB)	(8.5	GB)
	DMR-EX75	DMR-EX85		double sided		-R DL	+R DL
XP	36	55	1	2	1	1:45	1:45
SP	70	111	2	4	2	3:35	3:35
LP	138	222	4	8	4	7:10	7:10
EP (6 Hours)	* 212	333	6	12	6	10:45	
EP (8 Hours)	284	443	8	16	8	14:20	

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

RAM With the [EP mode (8Hours)] setting, playback on DVD-RAM-compatible DVD players may not be possible. Select [EP mode ( 6Hours )]. 47

#### **Disc Protection**

Protect your recordings from accidental deletion or overwriting. Folder: 31 Pictures: 31 Recordings: 26 The entire disc: 54 If you activated write-protection, remove it before processing.

#### For recording

The recording is saved to free areas on the disc. If there is no more space left on the disc/HDD, you must delete recordings or use a new disc.

Continuous recording or playback of both sides of a double-sided disc is not possible. After the end of the recording, the unit needs approx. 30 seconds to record data for recording management.

Programmes in 16:9 format are recorded in 4:3 format.

16:9 format is used to record to RAM.

The unit does not record in the HD ready format.

Conventional DVD-Vs are usually equipped with copy protection and cannot be copied.

# Informations

television

Press AV.

## Remote Control



#### **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.
- 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.

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

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	E 10	SBR	06
AKAI	27,30	HITACHI 22,2	3,31,40-42	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	N 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 WESTING	SHOUSE 05,06



RAM RAM4.7	<b>DVD-RAM</b> 4.7 GB 12 cm 9.4 GB 12 cm 2.8 GB 8 cm rewritable	RAM

#### DVD-RAM

The DVD-RAM can be compared with the hard disk and can be written to 100,000 times on average. The disc can only be played on DVD-RAM-compatible players. The recording occurs in DVD Video Recording format (VR). Movies and parts of movies can be edited and deleted. The deletion of movies frees previously used storage space. The creation of playlists does not require any additional storage space.

Dual-channel sound and 16:9 format are supported in addition to the TIME SLIP function.

#### DVD-R/+R (Recordable)

The DVD-R/+R can only be recorded once. Movies or parts of them can be deleted during processing, but storage space is still taken up and cannot be used for other movies. Through finalization, the DVD-R/+R becomes DVD-V that can be played on other units.

R R4.7	DVD-R (DVD-Video format) 4.7 GB 12 cm 1.4 GB 8 cm recordable	-R
	<b>+R</b> 4.7 GB 12 cm recordable	+R

DVD-R/-R DL/+R/+R DL	<b>Finalization</b> On the recording unit processed after finaliz	==⊳ ation.	VIDEO	55	
Recording with this recorder Playback on another unit					
Recording with another unit		Play	/back on this rec	order	

#### DVD-RW(V)/+RW (Rewritable)

DVD-RW(V)/+RW is rewritable and erasable. You must format the disc to be able to rewrite it again. Through finalization, the DVD-RW(V) becomes a DVD-V that can be played on other units. A finalized DVD-RW(V) can be reformatted and rewritten. Formatting deletes all data! A +RW becomes a DVD-V on creating a Top Menu.

RW	DVD-RW(V) (DVD-Video format) 4.7 GB 12 cm 1.4 GB 8 cm rewritable	-RW(V)
	<b>+RW</b> rewritable	+RW

DVD-RW -RW(V)	─ Finalizing ⇒ On the recording unit		Formatting	—> I	DVD-RW -RW(V)
The movies can no longer be processed after finalization.					
Recording with this recorder Playback on another unit					ther unit
Recording with another unit			Playback	on this	recorder

R DL	<b>DVD-R DL</b> 8.5 GB 12 cm writable	-R DL
	<b>+R DL</b> 8.5 GB 12 cm writable	+R DL

#### DVD-R DL/+R DL (Double Layer DVD / Dual Layer DVD)

The data are saved on two parallel layers. You have more space available. If the laser changes layers during playback, brief image and sound distortions may occur.

If there is not enough capacity to record a title on the first layer, the rest is recorded on the second layer. During the playback of a title recorded on two layers, the unit automatically switches between the layers and plays the title back like a normal title.



This unit cannot be used for direct recording on a DVD-R DL/+R DL. You can record on the hard disk and then copy the recording to a disc.

After finalization, these formats can only be replayed on DVD-R DL/+R DL/+RW- compatible players.

# Informations

RW	<b>DVD-RW</b> (DVD-VR format) playable only	-RW(VR)
	DVD-Video playable only	DVD-V
	DVD-Audio playable only	DVD-A
	CD CD-R/RW playable only	CD
	Video CD CD-R/RW playable only	VCD

# Playback discs



A DVD-RW that was recorded on another DVD recorder is played back in DVD-VR format by this unit. Programmes limited to "one-time recording" can be played back if they were recorded on a CPRM-compatible disc. If you format the disc, you can record and playback the DVD-Video format.

High-quality video and music discs.

Digital-quality music discs. Playback in stereo.

Music and audio recordings, music in MP3 format, pictures in JPEG and TIFF format.

Music and video recordings. SVCD in accordance with IEC62107.

MP3 JPEG You can playback data in MP3 and JPEG/TIFF formats from a finalized CD-R, CD-RW or DVD-R. After the recording you must finish the session. Depending on the recording conditions, playback can nonetheless have problems.

Some DVD-Audio with multi-channel sound is designed by the manufacturer to prevent intermixing on the entire disc or in certain areas. Depending on the disc type, the regional code and the recording conditions, it may not be possible to playback recorded discs. Additional information can be found on the disc case.

#### Regional codes



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.

#### Unplayable discs

- 2.6 GB and 5.2 GB DVD-RAM, 12 cm.
- 3.95 GB and 4.7 GB DVD-R for authoring.
- DVD-R, recorded in the DVD Video Recording format (VR).
  - DVD-R (V), DVD-R DL, DVD-RW (V), +R, +R DL recorded on another unit and not finalized.
  - Commercially available Blu-ray, DVD-ROM, +R (8 cm), CD-ROM, CDV, CD-G, Photo-CD, DivX, CVD, SACD, MV-Disc, PD, "Chaoji VCD", including CVD, DVCD and SVCD, which are not IEC62107 compliant, etc.

# Informations



Only play round discs.



Do not touch the recording surface of the disc.

RAM

#### Cartridge discs

When the write protection divice is active, you can neither record to nor process and delete the contents of the disc.



Cartridge write protection

Remove 8 cm discs from the cartridge before using them with this unit.



# Handling discs



If the surface of a disc that does not have a cartridge or that was removed from the cartidge is not clean, recording, playback or processing can be impaired by scratches, dirt, dust or fingerprints. Such impairments may also still occur when the disc is inserted into the cartridge.

Note: You can only write on the label side of the disc. Use a soft, oil-based felt-tip pen. Do not use a ball-point pen or other hard writing instrument. Do not apply stickers or labels to the disc. When not in use, put the disc in its case or cartridge.

#### **Cleaning the DVD-RAM**

Clean the disc with a special DVD-RAM cleaner (optional) and read the cleaner instructions before use. Stubborn dirt may not be removable so that recording, playback or processing is still impaired even after cleaning. In this case, the disc should no longer be used. Do not use petrol, alcohol, water, cleaning sprays, household cleaners or other solvents.

#### **DVD lens cleaner** (RP-CL720E)

Compatible models: Only for DVD recorders.

Do NOT use this cleaner with any other Panasonic DVD products or with the DVD products of any other companies since doing so may damage the products.

#### Cleaning of DVD-Videos, Video CDs and CDs

Wipe them with a damp and then a dry clothe.

# Informations

Pictures

the card capabity.

- -

**SD Memory Card** 

miniSD<sup>™</sup>Card

MultimediaCard 8 MB to 2 GB (Maximum)

The used memory can deviate from

SD

# **SD** Card

Use an SD card for playback and transfer (copying) pictures taken for example with a Digital Camera. MPEG2 moving pictures can be copied to the hard disc or DVD-RAM. Direct playback of MPEG2 moving pictures from the SD card is not possible.

If the SD Memory Card was formatted with another unit, under certain circumstances you may possibly not be able to use it with this unit. In this case, reformat the card with this unit. 55

Caution! All saved data are deleted during formatting.

#### Inserting the storage card

Opening the cover. Press the protruding section to open the cover to the slot.





Press on the centre

of the card until it

clicks into place.

Insert the card label up with the cut-off corner on the right.

Removing the storage card

Press on the centre of Closing the cover the card. Press down. Pull it straight out.





5:



Do not touch the memory card contacts.

Use an appropriate adapter

for miniSD<sup>™</sup> cards.



Write protection

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

When the card indicator SD on the unit's display is flashing, the card is being read from or written to. Do not turn off the unit or remove the card. Such action may result in malfunction or loss of the card's contents.

When the write protection device is activated, you can neither record nor edit or delete the contents of the SD Card.

This unit supports SD Memory Cards that are formatted with FAT 12 and FAT 16 systems (based on SD Memory Card spec.).

Additional information is available on the Internet http://panasonic.co.jp/pavc/global/cs



#### Folder structure

Give the folders and file names three-digit prefix numbers during recording to establish the desired playback sequence. Latin letters and Arabic numerals will display correctly. Other characters may not display correctly.

Folders can be created on another unit, but they cannot be selected as the target of a copy procedure.

A folder in which all numbers are "0" (e.g. DCIM000) cannot be displayed. If a folder or file name was entered with another unit, the name may not be displayed correctly and the data may not be able to be played or edited.



This unit can display the following folder names: \* \* \* : figures XXX : letters

#### **MP3/JPEG Format**

Disc (MP3/JPEG) RAM R CI Maximum of folders: Maximum number of MP3 files: Maximum number of JPEG files: Total number of recognizable file	2] 300 (including root folder). 3000. s including MP3,JPEG and other files types is 4000.
MP3 Format: Format: Compatible compression rate: Compatible sampling rate: This unit is not compatible with II	ISO9660 level 1 or 2 (except for extended formats), Joliet. 32kbps ~ 320kbps. 16kHz, 22.05kHz, 24kHz, 32kHz, 44.1kHz, 48kHz. D3 tags, MP3 files must have the extension ".mp3" or ".MP3".
JPEG Format: Format: Compatible pixels: Thawing Time: This unit is not compatible with N	ISO9660 level 1 or 2 (except for extended formats), Joliet. between 34x34 and 6144x4096 pixels, Sub sampling 4:2:2 or 4:2:0. approx. 3 sec (6M pixels). IOTION JPEG.
<b>SD Card (JPEG)</b> <u>SD</u> Compatible Media: Number of pixels: Thawing Time: Format:	SD Memory Card, miniSD <sup>™</sup> Card (a miniSD <sup>™</sup> Card adaptor needs to be inserted), Multi Media Card. 34 x 34 to 6144 x 4096. Approx. 3sec (6M pixels). FAT12, FAT16 / JPEG conforming DCF / Sub sampling 4:2:2, 4:2:0 / TIFF (Uncompressed RGB chunky) / DPOF Compatible.

# Hard disk (HDD)

 Hard disk drive (HDD)	D
 DMR-EX75 160 GB	
DMR-EX85 250 GB	
rewritable	





#### Hard disk

The hard disk is only a temporary memory.

Your HDD (Hard disk drive) is a high-precision recording unit with a particularly recording capacity and high recording speed. 22

The recording is made in DVD Video Recording format (VR).

Films or parts of films can be edited and deleted. Deleting films releases previously used storage space. Creating playback lists does not take up any additional storage space. As well as the TIME SLIP function, dual-channel sound and 16:9 format are also supported.

The hard disk automatically goes into the SLEEP mode if no function is selected for longer than 30 minutes and no disc is placed in the drive. An unexpected noise may be caused when switching on and off or during the SLEEP mode. The unit is working normally.

Your hard disk is a short-term memory medium. You should not use it for permanent data storage of recordings. Use your hard disk to view, edit and save recordings on a disc. If you encounter any problems, save the entire contents of your hard disk on another medium (disc). Please take the unit to your customer service. Recordings on a damaged hard disk cannot be rescued.

The unit must not be moved or exposed to vibrations or jolts because otherwise this would damage the hard disk.

Do not disconnect the mains plug during recording or playback. This can cause data loss.

Cigarette smoke, insect spray and other vapours must not penetrate the unit because otherwise this can cause faults.

Do not place the unit on any appliance which gives off heat. Do not erect the unit in places where condensation occurs, for example

- rooms with high humidity levels

- in the direct air flow of an air-conditioning system

- rooms with great fluctuations in temperature.

Condensation forms as moisture on a cold surface which is exposed to a sudden extreme change in temperature. This condensation can damage the hard disk and other parts inside the unit.

In such cases, do not switch the unit on. Wait for approx. two to three hours for the moisture to evaporate.

When changing the location of the unit,

- switch the unit off. Wait until "BYE" goes off in the display.
- disconnect the mains plug from the socket.
- do not lift the unit up until it has stopped completely (after approx. 2 minutes), because the hard disk runs on for a brief period after switching off.

#### Remaining recording time on the hard disk

This unit records with a data compression system (VBR - Variable bit rate). The length of the programmed recording is adjusted variably to the video data being recorded. This is why the display of the remaining recording time can differ from the remaining recording length. If there is not enough storage space for a recording, delete old titles from the hard disk.

Deleting playback lists does not enlarge the storage space.

Panasonic does not assume any liability for direct or indirect problems resulting in the loss of recordings or edited contents (data) and does not guarantee that the recorded or edited contents will work perfectly. This also applies to any repairs to the unit (also refers to parts which are not linked to the hard disk). No compensation is made for lost recordings or discs which have become defective.



The table shows an overview of the most important functions which can be recorded, played back and edited with the various formats on this unit. Not all funcitons are available to the same extent for all formats. Restrictions are stated separately in the corresponding description of the function.

Playback Functions	RAM	DVD-A	DVD-V	CD	VCD	-R	-R DL	-RW(V)	-RW(VR)	+R	+R DL	+RW	SD
Playback of a recorded title (DIRECT NAVIGATOR)	$\checkmark$					~	~	$\sim$	~	$\sim$	~	$\checkmark$	
Starting playback with Disc menu		~	~		$\sim$								
Playback starts with the last recorded title	$\sim$					く	$\sim$	~	~	$\sim$	~	$\checkmark$	
Playback starts from the beginning of the disc		~	$\sim$	$\checkmark$	~	∽(MP3)							
Changing the audio channel (DISPLAY)	$\sim$	~	~		~				~				
Quick View (PLAY/x1.3)	~												
TIME SLIP	$\sim$					~	$\sim$	~	~	$\checkmark$	~	~	
MANUAL SKIP	$\sim$					~	$\sim$	~	~	$\checkmark$	~	$\sim$	
CREATE CHAPTER	$\sim$												
Slow-motion/Frame playback	$\sim$	√*	~		∕**	~	$\sim$	~	~	$\checkmark$	$\sim$	$\sim$	

 $\checkmark^*$  - film scenes only,  $\checkmark^{**}$  - forwards direction

Recording	RAM	DVD-A	DVD-V	CD	VCD	-R	-R DL	-RW(V)	-RW(VR)	+R	+R DL	+RW	SD
Flexible Rec	~					~		$\mathbf{i}$		$\sim$		$\checkmark$	
Playback during recording	$\sim$												
Timer Recording	~					$\sim$		~		$\sim$		~	
Timer Recording with Ext Link	~					$\sim$		$\sim$		$\checkmark$		~	
Timer Recording via external devices	$\sim$					$\sim$		$\mathbf{i}$		$\checkmark$		$\sim$	
Recording via DV input	$\checkmark$					$\sim$		$\mathbf{i}$		$\checkmark$		~	
Manual recording via DV input	~					$\sim$		~		$\checkmark$		$\sim$	

Functions of the DIRECT NAVIGATOR	RAM	DVD-A	DVD-V	CD	VCD	-R	-R DL	-RW(V)	-RW(VR)	+R	+R DL	+RW	SD
Playback	~								~				
Delete	~					~	~	~		$\checkmark$	~	~	~
Properties	~					$\sim$	~	$\mathbf{i}$	~	$\checkmark$	~	$\sim$	~
Edit	~					$\sim$	~	$\sim$		$\checkmark$	~	$\checkmark$	$\sim$
Enter Name	~					$\sim$	~	$\mathbf{i}$		$\checkmark$	~	$\sim$	$\sim$
Set up Protection/Cancel Protection	~									$\checkmark$	~	$\checkmark$	~
Partial Delete	~												
Change Thumbnail	~					$\sim$	~	$\mathbf{i}$		$\checkmark$	~	$\checkmark$	
Divide Title	~												
Playlist	~								$\checkmark$				
Edit Playlist	~												

✓\* - only Playback and Properties

Functions of the DVD/Card Management	RAM	DVD-A	DVD-V	CD	VCD	-R	-R DL	-RW(V)	-RW(VR)	+R	+R DL	+RW	SD
Disc Name	~					~	$\checkmark$	$\checkmark$		$\checkmark$	~		
Disc Protection	~												
Delete all titles	~												
Format Disc	~							~		~	~	~	$\sim$
Auto-Play Select						~	$\sim$	$\checkmark$		~	~	~	
Finalize						~	$\sim$	$\sim$		~	~		
Create Top Menu												~	



RAM HDD CPRM (Content Protection for Recordable Media)

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

HDCP (High Bandwidth Digital Content Protection) is copy protection which is transferred via HDMI connections and partly via DVI. The units must be able to decode this copy protection for playback.

#### **Recording formats**

#### **DVD Video Recording format (VR)**

This format enables recording and playback. Digital programmes limited to "one-time recording" can be recorded to a CPRMcompatible disc. You can record to a CPRM-compatible DVD-RAM. Playback is only possible with a compatible DVD player. Use a DVD-RAM to record in DVD Video Recording format. Suitable data for recording and playback: video and still pictures.

#### **DVD-Video format (V)**

This recording format is the standard DVD-Video. Digital programmes that are limited to "one-time recording" cannot be recorded. To record in DVD-Video format, use a DVD-R/-R DL or -RW(V).

Suitable data for recording and playback: video.

#### +VR format

Digital programmes that are limited to "one-time recording" cannot be recorded. To record in +VR format, use a +R/+R DL oder +RW. Suitable data for recording and playback: video.

#### Licence information

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 consumer uses only unless otherwise authorized by Macrovision. Reverse engineering or disassembly is prohibited.

## 

Method of encoding digital signals. The signals are very much compressed in the process to enable recordings of large volumes of data.

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**DTS (Digital Theater Systems)** Sound system used in cinemas or movie theaters all over the world. "DTS" and "DTS 2.0 + Digital OUT" 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.

## HDAVI Control<sup>TM</sup>

HDAVI Control<sup>™</sup> is a trademark of Matsushita Electric Industrial Co., Ltd.

# Ηοπι

HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.

# VIDEO

VIDEO Plus+ and PlusCode are registered trademarks of Gemstar Development Corporation. The VIDEO Plus+ system is manufactured under license from Gemstar Development Corporation.

miniSD<sup>™</sup> is a trademark of SD Card Association. SD logo is a trademark.
Informations	If you need help	·\.
CUSTOMER SERVICE	Should problems occur, please try to resolve them by referring to the following descriptions. If this does not help, you should contact your dealer or customer service.	In
	Normal disc rotating sounds, atmospheric interference during reception, picture interference while fast-forwarding, and imited reception of the satellite programmes are not signs of a defective unit. If a disc cannot be played due to poor quality, try it again with a disc from Panasonic.	Page
ERROR MESSAGES	The unit is malfunctioning.	
The error code H □□ , U□□ or F□□ appears.	<ul> <li>The numbers following H, U or F indicate the status of the unit.</li> <li>Switch the unit to Standby mode with U/I. If the unit does not switch to Standby mode, press U/I for approx. 10 seconds or unplug it for a minute and then plug it back in.</li> <li>Press U/I to switch on the unit. If this does not solve the problem, contact customer service with the displayed error code.</li> </ul>	
Error code U59	<ul> <li>The unit is hot and switches to Standby mode for safety reasons.</li> <li>Wait approx. 30 minutes until the message disappears. Place the unit in a well ventilated location. Do not block the vents at the back of the unit.</li> </ul>	
Error code U61	<ul> <li>The unit has found an error during recording or playback without an inserted disc. The unit proceeds with the recovery procedure. This procedure restores the normal operating mode. The unit is not defect. Please wait until the message goes off.</li> </ul>	
Error code U71	The connected unit is not suitable for connection to HDMI.	
Error code U72 Error code U73	<ul> <li>The HDMI connection does not work perfectly.</li> <li>The connected unit is not suitable for connection to HDMI.</li> <li>The HDMI cable is too long.</li> <li>The HDMI cable is broken.</li> </ul>	
Error code U88	<ul> <li>A problem occurred during recording or playback of a disc.</li> <li>The unit is not defective, but is performing a restore procedure.</li> <li>Wait until the error message disappears from the display.</li> </ul>	
HARD ERR	<ul> <li>The unit is not functioning properly.</li> <li>Switch the unit off and back on again. If this does not solve the problem, contact customer service.</li> </ul>	
The unit automatically switches into standby mode.	<ul> <li>One of the unit's safety devices may have been activated.</li> <li>Press U/I to switch on the unit.</li> </ul>	
FUNCTION         Unit not functioning.         > Check the connection to the power supply.         > The unit is in Standby mode for a Timer programming via external units. EXT-L appears in the display.         Press EXT LINK to switch off recording standby mode.         • To cancel a recording prematurely, stop the transfer of the recording signal on the external unit.		21
The disc cannot be ejected.	<ul> <li>&gt; The unit is currently recording.</li> <li>• With the unit switched off, press STOP ■ and CH ∧ on the unit at the same time and hold for about 5 seconds. Contact your dealer.</li> <li>&gt; The above procedure cannot be executed if the child-safety feature is activated.</li> <li>• Switch off the child safety feature.</li> </ul>	65
Access to the HDD is slow.	<ul> <li>The HDD (Hard disk drive) is in SLEEP mode. ("SLEEP" appears in the display of the unit).</li> </ul>	
L		1



#### Page

		- <b>J</b>
PICTURE	Check the connection to the TV, e.g. AV1.	8
No picture.	The PROGRESSIVE output is activated, but the connected TV is not progressive-capable.	61
There is picture interference.	• Press and hold <b>STOP</b> ■ and <b>PLAY/x1.3</b> on the unit at the same time for more than 5 seconds. The function is switched to half-picture (INTERLACE).	61
	<ul> <li>The [TV System] setting does not match that on the disc.</li> <li>In STOP mode, press and hold STOP ■ and OPEN/CLOSE ▲ on the unit for more than 5 seconds. This switches the unit from PAL to NTSC or vice versa.</li> </ul>	50
Television reception worsens       > Check the antenna connection and the alignment of your antenna.         when the unit is connected.       > You may need to use a signal amplifier.		
The TV picture format is not set correctly. Check the [TV Aspect] setting in the [Connection] [Setup] menu.		
No On-screen messages.  Change the [On-Screen Messages] setting in the [Display] [Setup] menu.		49
Poor picture in spite of good signal quality.	<ul> <li>Overmodulation makes the signal strength display go to red.</li> <li>Readjust the picture with your room aerial until the picture quality improves.</li> </ul>	45
SOUND		
No sound. Distorted sound.	Check the connections.	8
Volume set to quiet.	<ul> <li>If you connected an amplifier, check the input mode.</li> <li>Switch off the V.S.S. function if it causes problems.</li> </ul>	57
It is not possible to hear the desired sound type.	<ul> <li>Press <b>DISPLAY</b> to select the desired sound type.</li> <li>Change the appropriate setting in the Sound Setup menu.</li> </ul>	57
	The sound cannot be switched on some discs.	
The sound cannot be set for stereo or NICAM broadcasts.	<ul> <li>Connect external unit with audio cables even if you use a digital connection.</li> <li>You can change the sound type when using DVD-RAM.</li> </ul>	63
REMOTE CONTROL No functions.	<ul> <li>An incorrect remote control code was selected.</li> <li>Check the batteries.</li> <li>Point the remote control at the sensor on the unit.</li> <li>The child lock feature has been activated.</li> </ul>	65 5 65 65
The TV cannot be operated.	An incorrect remote control code was selected.	65
DISPLAY		
The display light is weak.	Change the [FL Display] setting in the [Display] [Setup] menu.	49
"0:00" blinks on the unit display.	No time. Set the time in the [Others] [Clock] [Setup] menu.	52
External Input		
Video or audio is not recorded from an external unit.	<ul> <li>The external unit is not connected correctly.</li> <li>The incorrect input channel AV2, AV3, AV4 or DV IN was selected.</li> </ul>	63 63
Software Update When are the software updates broadcast?	The unit shows automatically when a software update has been broadcast, and also automatically updates the software if thus function has not been switched off in the [Setup] menu.	53



		Page
PLAYBACK Playback does not start.	<ul> <li>The disc is dirty or badly scratched.</li> <li>You inserted a disc that is not suitable for playback.</li> <li>You inserted a blank disc.</li> </ul>	66
DVD-Video will not play.	Some DVD-Videos cannot be played if the security level has been changed.	47
No reaction when PLAY ► is pressed.	<ul> <li>O appears on the screen. The procedure is being prevented by the unit or the disc.</li> <li>The child lock feature has been activated.</li> </ul>	65
A title or chapter is not played back afer being selected.	<ul> <li>Some titles or chapters of DVD-Videos are not played back if the security level has been changed.</li> </ul>	47
Soundtrack/subtitles cannot be selected or do not match the	<ul> <li>The subtitles were not recorded on the disc or are not switched on.</li> </ul>	47
language selected in the Setup menu.	<ul> <li>The languages were not recorded on the disc.</li> <li>You may need to use the disc menu to select the languages.</li> </ul>	15
The angle cannot be changed.	The angle perspective can only be changed for scenes that were recorded from different angles.	56
You forgot your security password.	<ul> <li>Select the DVD drive and, while the disc tray is open, press and hold          REC and PLAY/x1.3 on the unit for at least 5 seconds.     </li> </ul>	
RECORDING Cannot record.	<ul> <li>Check whether the inserted disc is suitable for recording.</li> <li>The disc is not formatted. Format the disc.</li> <li>The write-protection device on the cartridge is set to "PROTECT". Deactivate the write protection.</li> <li>Deactivate the write protection in the DVD Management menu.</li> <li>The material that you want to record is copy-protected. The number of possible copies is limited with some programmes.</li> <li>Discs containing PAL and NTSC signals cannot be recorded.</li> </ul>	54 54
Some or all recorded programmes were lost.	<ul> <li>If there is a power cut during recording or processing, or if the unit is unplugged from the household mains socket, the programme may be lost or the disc may be damaged. Reformat the disc or use a new disc.</li> </ul>	54
Timer Recording is not functioning.	<ul> <li>The Timer programming is defective, different Timer programmes overlap each other. Correct the programming.</li> <li>Check the clock setting.</li> </ul>	20 52
Timer Recording cannot be cancelled.	<ul> <li>With an EXT LINK-controlled recording via an external unit, press EXT LINK. The EXT-L display disappears.</li> <li>If you want to cancel the recording prematurely, stop the transfer of recording signal on the external unit. Press EXT LINK to switch off recording standby.</li> </ul>	21
COPYING Noises from rotating Disc.	<ul> <li>When recording or high-speed copying on a Disc, the rotation noise is louder than normal.</li> </ul>	
You cannot copy to a DVD-R etc. In High Speed Mode.	Before recording on the hard disk [Rec for High Speed Copy], adjust to [On] in the [Setup] menu.	47
Copying also takes relatively long in the high-speed mode.	<ul> <li>Sometimes, not even high-speed compatible discs allow for recordings at maximum speed.</li> </ul>	



		Page
TV Guide The displayed information is wrong.	The broadcasting companies are responsible for the information. Deviations are possible when changes are made at the last minute.	
No or incomplete data.	<ul> <li>Date/time incorrectly set.</li> <li>The signal is too weak or no signal was found. Check the aerial. Realign the aerial and check the values with the signal quality in the [Setup] menu.</li> <li>The broadcasting companies are responsible for the information. Deviations are possible when changes are made at the last minute.</li> </ul>	52 45
EPG database empty or incomplete after switching on.	<ul> <li>Downloading the data was not possible. Switch the unit to standby over night.</li> <li>Activate the EPG Download in the [Setup] menu.</li> </ul>	67
No current data in spite of active EPG download function.	Downloading the data was not possible. Switch the unit to standby over night.	
DVB-T No station found. Time not set.	<ul> <li>The signal is too weak or no signal was found. Check the aerial. Realign the aerial and check the values with the signal quality in the [Setup] menu.</li> <li>Repeat the auto setup.</li> </ul>	53 45
Date/time incorrectly set.	<ul> <li>The transmission did not work.</li> <li>Repeat the Automatic Time Setting.</li> </ul>	52
Unusual station sorting.	The station sorting of this unit is pre-defined. Use profiles to sort the stations as you want them.	
No teletext.	<ul> <li>This DVD Recorder does not support analogue teletext.</li> <li>When subtitle is on or additional information in the Digital channel information is displayed, Digital Teletext does not work.</li> </ul>	
No automatic station allocation in VIDEO Plus+.	No unique code for the digital stations. Allocate the stations manually when programming for the first time. The DVD Recorder will then recognise the stations correctly in future.	
Which aerial is suitable for receiving DVB-T?	Any (terrestrial) roof aerial can be used. Room rod aerials are also suitable. Use an active room aerial if the reception is poor.	
After the auto setup, there aren't any stations in the station list although found stations were displayed during auto setup.	<ul> <li>[Shipping Condition] was performed or the unit was in the delivery status. The auto setup was then started and interrupted.</li> <li>Do an auto setup again and let it continue right through to the end. The data is only saved after this has been completed.</li> </ul>	



		Page
HDMI Which accessories are required to hear multi-channel Surround Sound?	Multi-channel sound can only be played back with this unit if it is connected with an HDMI cable or a digital audio optical fibre cable to an amplifier with an integrated decoder.	
Switching on takes longer in spite of the Quick Start function.	<ul> <li>All units connected by HDMI are checked while switching on. This can take a while.</li> </ul>	
<ul> <li>No picture on the television set.</li> <li>Check whether the television set and DVD Recorder are connected correctly with the HDMI cable. If the external unit has been connected correctly, the HDMI message appears briefly on the display of the DVD Recorder.</li> <li>If more than four units are connected with HDMI cables, you may possibly not be able to see a picture. Reduce the number of connected units.</li> <li>If the unit is connected via COMPONENT VIDEO OUT to a television unit which is not progressive-compatible, no unit can be connected with HDMI. The [Progressive] setting is automatically switched to [On] in the Setup if a unit is connected up with HDMI.</li> </ul>		59 50
Wrong screen format.	<ul> <li>If a television set is connected via HDMI AV OUT, in the [Setup] menu, set the setting [Aspect for 4:3 Video] to [4:3].</li> <li>Check the setting [TV Aspect] in the [Setup] menu.</li> </ul>	51 50
Part of the picture appears duplicated some of the time when using the output. COMPONENT VIDEO OUT	<ul> <li>Do not connect this unit to the television set with an HDMI cable.</li> <li>In the Setup menu, set the [Progressive] setting to [Off].</li> </ul>	50
<ul> <li>No sound.</li> <li>Low volume.</li> <li>Sound with interference.</li> <li>The required audio type cannot be heard.</li> <li>The sound is not played back if the Bitstream Signal is output from HDMI AV OUT or OPTICAL DIGITAL AUDIO OUT.</li> <li>If more than four units are connected with HDMI cables, you may possibly not hear any sound. Reduce the number of connected units.</li> <li>If the unit is connected with an HDMI cable to a television set and OPTICAL DIGITAL AUDIO OUT is used as audio output, in the [Setup] menu, set the setting [Digital Audio Output] to [Optical only].</li> <li>When one or several units are connected via HDMI AV OUT, it is possible for there to be interference with the sound. Select another connection type.</li> </ul>		51
HDAVI Control is not working.	<ul> <li>In the [Setup] menu, change the setting [Control with HDMI / Q Link] to [HDMI and Q Link].</li> <li>Use a fully wired HDMI cable.</li> <li>The connected unit possibly does not support HDAVI control.</li> </ul>	51 59



#### Bitstream

Digital multi-channel audio data (e.g. 5.1-channel) before decoding to the individual channels.

#### Decoder (e.g. DTS / Dolby Digital)

A decoder converts the coded audio signals of the DVDs back to the original signals. This procedure is called decoding.

#### Digital audio optical fibre cable

When this cable is connected, the electronic signals for output to the amplifier are converted into optical signals.

#### **DPOF (Digital Print Order Format)**

DPOF is the standard format for printing pictures recorded with a digital camera etc. It enables automatic printing in a photo shop or on your own printer.

#### **Chrominance signal**

The three signals red, green and blue can be converted into three other signals: luminance Y (luminance signal) and 2 chrominance signals  $P_{\rm B}/P_{\rm R}$  (colour difference signals).

#### **Brightness signal Y**

Analogue video signal showing the brightness levels of the picture, regardless of the colour signal (C) chrominance signal. It allows for higher resolution and colour reproduction true to the original colour.

#### LPCM (Linear PCM)

These are uncompressed digital signals, similar to those on CDs. LPCM sound can be used during recording in XP mode.

#### PCM (Pulse Code Modulation)

Standard procedure for recording uncompressed digital audio signals.

#### **RGB** (Red Green Blue)

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

#### Scan frequency

When converting (encoding) to a digital signal, the (analogue) sound signal is scanned at certain time intervals. The number of scans per second is called the scan frequency. The higher the scan frequency, the better the original sound is reproduced.

#### Sound mixing

This is the remixing of the multi-channel sound that exists on some discs to two channels for stereo output. Sound mixing makes sence e.g. if you want to playback the 5.1-channel sound of a DVD over your television speakers. However, some discs do not allow mixing. In this case, only the two front channels are output.

#### **TIFF (Tag Image File Format)**

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

## Informations

# Specifications

Power supply:	AC 220 V - 240 V 50 Hz	Dimensions: Weight:	approx. 430 mm (W) x 58 mm (H) x 329 mm (D) approx. 4.3 kg	
		Operating temperature	: 5°C - 40°C	
Power consumption:	33 W	Operating humidity:	10% - 80% RH (no condensation)	
LASER specification	LASER product of class 1	Recording Disc		
	Wavelength: 662 nm for DVD, 780 nm for CD	DVD-RAM disc:	Ver.2.0	
Laser performance:	No hazardous radiation is emitted with the safety		Ver.2.1/3XSPEED DVD-RAM Revision 1.0	
	protection.		Ver.2.2/5X SPEED DVD-RAM Revision 2.0	
		DVD-R disc .	for General Ver 2 0/4X SPEED DVD-R Revision 1 0	
Optical pick-up	System with 1 lens, 2 integration units.		for General Ver.2.x/8X SPEED DVD-R Revision 3.0	
Recording format	DVD-RAM: DVD Video Recording format		for General Ver.2.x/16X SPEED DVD-R Revision 6.0 for DL Ver.3.0	
	DVD-R: DVD-Video format		for DL Ver.3 x/4x SPEED DVD-R for DL Revision 1.0	
	DVD-R DL: DVD-Video format	DVD-RW disc:	Ver.1.1	
	DVD-RW: DVD-Video format		Ver. 1.x/2X SPEED DVD-RW Revision 1.0	
	+R, +RW, +R DL		Ver. 1.x/4X SPEED DVD-RW Revision 2.0	
Playback Disc	DVD-RAM (VR format), DVD-R (Video format, MP3,		Ver. 1.x/6X SPEED DVD-RW Revision 3.0	
	JPEG), DVD-R DL (Video format), DVD-RW (Video	+R disc:	Ver.1.0, Ver.1.1, Ver.1.2, Ver. 1.3, for DL Ver. 1.0	
	format, VR format), +R, +R DL, +RW, DVD-VIDEO,	+RW disc:	Ver. 1.1, Ver.1.2/4X SPEED	
	DVD-AUDIO, CD-AUDIO (CD-DA), Video CD, SVCD			
	(conforming to IEC62107), CD-R/CD-RW (CD-DA, Video			
	CD, SVCD, MP3/JPEG formatted discs)			
Regional Code	#2	HDD	160/250 GB	
Video interface		Video interface		
Input	Input impedance: 75 Ohm.	TV system:	PAL Colour Signal 625lines 50fields,	
AV1 SCART	Video: 1 Vp-p		NTSC Colour Signal 525Lines 60Fields	
AV2 SCART	Video: 1 Vp-p, RGB Video: 0.7Vp-p (PAL),	Recording System:	MPEG 2 (Hybrid VBR)	
	S Video: Y: 1 Vp-p, C: 0.3 Vp-p (PAL)			
AV3 VIDEO	Video: 1 Vp-p	DV Input	IEEE1394 Standard (4pin), (PAL/NTSC)	
AV3 S VIDEO IN	Y: 1 Vp-p, C: 0.3 Vp-p (PAL)	HDMI output	Version 1.2a (5/6i/480i/ 5/6p/480p /20p 1080i)	
	Video: 1 Vp-p		(EDID Ver. 1.3) 19pin type A	
AV4 S VIDEO IN	Y: 1 Vp-p, C: U.3 Vp-p (PAL)	SD Card Slot	SD Memory Card Slot	
	For 75 Onm termination.			
AVISCARI	Video: Y 1 Vp p. C: 0.2 Vp p (PAL)	A		
AV/2 SCART	S video: 1 Vp-p, C. 0.3 Vp-p (FAL)	Audio Interface	Insut impedance, more than 10 kOhm	
VIDEO	Video: 1 Vp-p		Standard: 0.5 Vrma, full apple: 2 Vrma at 1 kHz	
S VIDEO	Y: 1 Vn-n C: 0 3 Vn-n (PAL)			
COMPONENT-	Y 1 Vn-n P : 0 7 Vn-n P : 0 7 Vn-n		Standard: 0.5 Vrms, full scale: 2 Vrms at 1 kHz	
VIDEOOUT	(PAI : 576n/576i NTSC:480n/480i)		Standard, 0.5 Vinis, full scale, 2 Vinis at 1 kHz	
			The output impedance of each output terminal is	
Antenna Receive Inpu	t 75 Ohm Termination	Output	less than 1 kOhm	
RF Converter Output	not provided	AV1 SCART	Standard: 0.5 Vrms full scale: 2 Vrms at 1 kHz	
Active Antenna	not provided	AV/2 SCART	Standard: 0.5 Vrms, full scale: 2 Vrms at 1 kHz	
			Standard: 0.5 Vrms, full scale: 2 Vrms at 1 kHz	
		OPTICAL	Ontical connection (PCM Dolby Digital DTS MPEG)	
		Recording System:	Dolby Digital 2ch. Linear PCM (XP mode)	
Tuner			, , , , , , , , , , , , , , , , , , , ,	
Tuner System	[PAI -1]			
Channel Coverage	UHF: CH 21-68: [DVB-T] UHF: CH21-68			
	· · · · · · · · · · · · · · · · · · ·		······	
Quick Start: From Pow	ver on, recording starts in about 1 second after the $\bullet$ <b>REC</b> by	utton is pressed.	1 as a set of the set	
If the GUIDE button is p	bressed while the unit is off, the Electronic Programme Guid	ie (EPG) displays in about	i second.	
	to the DVD-Recorder with Scart, COMPONENT VIDEO, VIL	DEC OF S VIDEC)		
Note: The values given for weight and dimension are approximate values. The technical data can be changed without advanced notice.				

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#### - If you see this symbol -

Information on Disposal for Users of Waste Electrical & Electronic Equipment (private households)



This symbol on the products and/or accompanying documents means that used electrical and electronic products should not be mixed with general household waste. For proper treatment, recovery and recycling, please take these products to designated collection points, where they will be accepted on a free of charge basis. Alternatively, in some countries you may be able to return your products to your local retailer upon the purchase of an equivalent new product. Disposing of this product correctly will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling.

Please contact your local authority for further details of your nearest designated collection point. Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

#### For business users in the European Union

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Information on Disposal in other Countries outside the European Union

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