

Version 07-08-2002

## Philips Hard Disc Video Recorder

# *The way to Convenient TV!*

- **No media to handle!**
- **Instant Record!**
- **Play Anytime!**
- **Pause Live TV!**
- **Instant access to all recordings!**
- **DVD Playback**
- **MP3 Audio**
- **Digital Picture & Sound Quality!**



*Let's make things better.*



# PHILIPS

**Hard Disc Video Recorder + DVD Player****Playback System**

- DVD-Video
- DVD+R
- DVD+RW
- Video CD (VCD)
- MP3-CD<sup>1</sup>
- Audio CD (CD-R & CD-RW) <sup>1</sup>

<sup>1</sup> applicable for single session discs only

**Optical Read System**

Laser type	AlGaAs
Numerical Aperture	0.60 (DVD) 0.45 (VCD/CD)
Wavelength	650 nm (DVD) 780 nm (VCD/CD)
Output power	0.1 - 0.7 mW
Focusing	Astigmatic
Tracking	Differential Phase Detection CD3-Spot

<b>TV Standard</b>	PAL	NTSC
Scan Frequency	50Hz	60Hz
Number of lines	625	525
Playback	PAL / NTSC	
Region	2	

**Video Format**

Digital Compression	MPEG2 for DVD MPEG1 for VCD
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DVD-VIDEO	50Hz
• Horizontal Resolution	720 pixels <sup>2</sup>
• Vertical Resolution	576 lines

VCD	50Hz
• Horizontal Resolution	352 pixels <sup>3</sup>
• Vertical Resolution	288 lines

<sup>2</sup> equivalent to 500 lines on your TV

<sup>3</sup> equivalent to 250 lines on your TV

**Audio Format**

Playback	MPEG1,
Compressed	AC-3, DTS Digital PCM 16, 20, 24 bit fs 48, 96 kHz
• Analog stereo & Dolby ProLogic (VCD & downmix from multi-channel sound)	
• 3D Sound for virtual 5-channel sound on 2 speakers	

**Audio Performance**

DA Converter	24 bit
DVD	fs 96 kHz 4 Hz - 44 kHz fs 48 kHz 4 Hz - 22 kHz
Video CD	fs 44.1 kHz 4 Hz - 22 kHz
Audio CD	fs 44.1 kHz 4 Hz - 20 kHz
Signal-Noise (1kHz)	105 dB
Dynamic Range (1kHz)	85 dB
Crosstalk (1kHz)	105 dB
Distortion / Noise (1kHz)	0.07% dB
MPEG MP3	MPEG audio layer 3

**DVD-Video Functionality**

- Multi-angle Selection
- Audio Selection (1 out of max. 8 languages)
- Subtitles Selection (1 out of max. 32 languages)
- Aspect Ratio conversion
- (16:9, 4:3 Letterbox, 4:3 Pan Scan)
- Parental Lock
- Disc Menu support (Title Menu and Root Menu)
- Resume after stop / standby

**Disc playback**

- Auto Resume
- Play / Stop / Pause / Slow / Zoom
- Fast Forward/Backward
- Step Forward/Backward
- Title / Track Select
- Next / Previous Title / Track / Chapter
- Repeat (Chapter / Title / All) or (Track / All)
- A-B Repeat
- Parental Lock

**Video CD Functionality**

- V1.1 (Playback only)
- V2.0 with PBC (Playback control)

**Audio CD Functionality**

- Time Display (Total /Track / Remaining Track Time)
- Full audio functionality with remote control

**MP3 Functionality**

- Album and track Selection
- Repeat (disc / album / track)
- Nested directory level supported to 8 levels
- Maximum number of Albums is 32
- Maximum number of tracks is 999

**Hard Disc Video Recorder + DVD Player****HDD Recording Format**

Medium	Hard Disc		
Size	3.5" Half Height		
Capacity	40 Gbyte		
File System	ERTFS		
		hr : mm	Mbit/sec
Recording time	HQ	12 : 13	5.5
	SQ	19 : 23	3.0
	LP	36 : 45	2.0

**TV System**

Output	PAL
Input	PAL, SECAM
Internal tuner	PAL B/G/I, SECAM L/L'

**Video Format**

Digital Compression	MPEG2 CBR		
HQ,SQ mode			
Horizontal Resolution	720 pixels <sup>4</sup>		
Vertical Resolution	576 lines		
LP mode			
Horizontal Resolution	360 pixels <sup>5</sup>		
Vertical Resolution	576 lines		

<sup>4</sup> equivalent to 500 lines on your TV

<sup>5</sup> equivalent to 250 lines on your TV

**Audio Format**

LP	ADPCM	16 bit, fs 44,1 kHz
		352,8 Kbps per Channel
HQ, SQ	PCM	16 bit fs 44,1 kHz
		1411,2 Kbps per channel

**Audio Performance (HQ & SQ)**

DA Converter	16 bit
AD Converter	24 bit
Signal-Noise (1kHz)	80 dB
Dynamic Range (1kHz)	80 dB
Crosstalk (1kHz)	80 dB
Distortion / Noise (1kHz)	0.1%

**Reception**

Tuner	UHF + VHF + Hyperband
Tuning	PLL, Freq., 99 presets
Tuning/Install	Guide Channel Mapping, Manual Search/Store, Automatic Search/Store
Audio	NICAM, German stereo, Mono

**User Interface**

- Disc Space Free/Used Status
- Time Status Bar
- Time Shift Buffer 30, 60, 180 min
- English, French, German, Dutch, Spanish, Italian

**Programming**

Number of Events	20 / 1 Year
Programming System	Once, Daily, Weekly, Episode
Programming Mode	OTR, Remote
Record Control and Transmitter Identific.	PDC, VPS
Timer Programming	ShowView

**General Functionality**

Backup Presets & Timer Events	Permanent
Backup Clock & Calendar	1 minute
Time/Date Download (Time/Date)	PDC, Text
Audio Recording Level	Automatic

**Playback Functionality**

- Play / Stop / Pause
- Fast Forward/Backward (x2, 4, 32, 128)
- Step Forward/Backward
- Slow (x 1/2, 1/4, 1/8)
- Navigation System
- Instant Jump
- Instant Replay
- Title Select
- Next / Previous Title
- Perfect Still
- Audio Selection (Stereo, Mono, Dual Languages)
- 16:9, 4:3 Letterbox, 4:3 Pan Scan
- Title Erase
- Instant Overview of contents

**Record Functionality**

- Direct Record
- One-Touch Record (OTR)
- Episode Recording (Favourite Program)
- Station ID and Program Name recording

## Hard Disc Video Recorder + DVD Player



### TV Standard

Standard	PAL/SECAM
Scan Frequency	50Hz
Number of lines	625

### Video Performance

DA Converter	10 bit
AD Converter	9 bit
Signal handling	Components
Video Output	1 Vpp into 75 ohm
S-Video Output	Y: 1 Vpp into 75 Ohm C: 0.300 Vpp into 75 Ohm
RGB Output	0.7 Vpp into 75 Ohm

### Rear Connections

SCART 1	CVBS in/out, RGB out, pin 8 out (3 levels), pin 16 out (2 level)
SCART 2	CVBS in/out, RGB in, decoder, pin 8 in (3 levels), pin 16 in (2 level)
S-Video Input	Hosiden (Mini DIN) 4-pin
Audio Output	L/R Cinch (white/red)
Digital Audio Output	1 coaxial, 1 optical IEC958 for CDDA / LPCM IEC1937 for MPEG2, AC-3, DTS
RF Antenna Input	IEC 75 ohms
RF TV Output	IEC 75 ohms

### Package Contents

- Hard Disc Recorder
- Remote Control including two R06/AA batteries
- Directions for use
- full SCART cable (1,5 M)
- Coax RF antenna cable

### Packaging

Colours	Pacman Conform
Languages	English (front, top) French (rear) Spanish (right) German (left)
Size (W x H x D)	520 x 181 x 452 mm
Gross weight	appr. 6.5 kg
Buffers	Polypropylene

### RF Modulator

Adj. Output Freq.	559 to 523 MHz (Ch 32-40)
Default Frequency	591 MHz (Ch 36)
Adjust Frequency	Software

### User Interface

OSD Languages	English, French, German, Spanish, Italian, Dutch
Display	FTD

### Power Supply

Power Inlet	220-240 V, 50Hz
Power consumption	Operation 42 W Standby 5 W

Operation Temp.	5°C - 35°C
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### Cabinet

Dimensions (wxhxd)	435 x 87 x 340 mm
Net Weight	5,1 Kg

### Remote Control

Type	"Waist"
Codes	RC5 / RC6