

Service  
Service  
Service

DVDR5350H/02/19 & DVDR7300H/02/05/19



# Service Instruction



## Contents

	<b>Page</b>
1 Technical Specifications and Connection Facilities	2
2 Test Disc & Repair Hints	5
3 Firmware Upgrading	6
4 Service Flow chart	7
5 Directions For Use	12

The 2005 range DVD Recorder products are repaired centrally.  
Defective sets must be identified, labelled and stored for pick-up.  
This document gives full instructions for a functional check.  
Technical information to repair faulty sets is therefore not provided in this document.

To test in-coming sets the following must be performed:

1. Verify / Reproduce the customer's problem
2. Verify that set has latest Firmware (see chapter 3) and upgrade if it is not the latest version.
3. Full functional check

©Copyright 2005 Philips Consumer Electronics B.V. Eindhoven, The Netherlands.  
All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise without the prior permission of Philips.



# 1. Technical Specifications and Connection Facilities

## 1.1 General:

Mains voltage	: 220V – 240V
Mains frequency	: 50 Hz
Power consumption (record)	: 40 W
Standby Power Consumption	: < 4 W
Eco standby	: < 3 W

## 1.2 RF Tuner

Test equipment: Fluke 54200 TV Signal generator  
 Test streams: PAL BG Philips Standard test pattern

### 1.2.1 System

PAL B/G, PAL D/K, SECAM L/L', PAL I

### 1.2.2 RF - Loop Through:

Frequency range	: 45 MHz – 860 MHz
Gain: (ANT IN - ANT OUT)	: -6dB to 0dB

### 1.2.3 Receiver:

PLL tuning with AFC for optimum reception  
 Frequency range : 45.25 MHz – 857 MHz  
 Sensitivity at 40dB S/N (video unweighted) : ≤ 60dBμV at 75 Ω

### 1.2.4 Video Performance:

Channel 25 / 503,25 MHz,  
 Test pattern: PAL BG PHILIPS standard test pattern,  
 RF Level 74dBV, Measured on SCART 1  
 Frequency response : 0.1 MHz – 4 MHz ± 3dB  
 Group delay (0.1 MHz - 4.4 MHz) : 0 nsec ± 150 nsec

### 1.2.5 Audio Performance:

#### Audio Performance Analogue - HiFi:

Frequency response at SCART 1 (L+R) output : 100 Hz – 12 kHz / 0 ± 3dB  
 S/N Ratio (20Hz – 20kHz) unweighted : ≥ 50dB  
 Harmonic distortion (1 kHz, ± 25 kHz deviation) : ≤ 1.5%

#### Audio Performance NICAM:

Frequency response at SCART 1 (L+R) output : 40 Hz – 15 kHz / 0 ± 3dB  
 S/N Ratio (20Hz – 20kHz) unweighted : ≥ 60dB  
 Harmonic distortion (1kHz, ± 25 kHz deviation) : ≤ 0.5%

### 1.2.6 Tuning

#### Automatic Search Tuning

Scanning time without RF signal : 3min. typical  
 Stop level (vision carrier) : ≥ 37dB/μV  
 Maximum tuning error of a recalled program : ± 100 kHz  
 Maximum tuning error (drift) during operation : ± 100 kHz

#### Tuning Principle:

Automatic B, G, I, DK and L/L' detection  
 Manual selection in "STORE" mode

## 1.3 Analog Inputs / Outputs

### 1.3.1 SCART 1 (Connected to TV)

#### Pin Signals:

1	Audio-out R	1.8V RMS
2	Audio-in R	
3	Audio-out L	1.8V RMS
4	Audio GND	
5	Blue / Chroma GND	
6	Audio-in L	
7	Blue-out	0.7Vpp ± 0.1V into 75Ω
8	Function switch	< 2V = TV > 4.5V / < 7V = asp. Ratio 16:9 DVD > 9.5V / < 12V = asp. Ratio 4:3 DVD
9	Green GND	
10	P50 control	not use
11	Green out	0.7Vpp ± 0.1V into 75Ω
12	NC	
13	Red / Chroma GND	
14	Fast switch GND	
15	Red-out / Chroma-out	0.7Vpp ± 0.1V into 75Ω 300mVpp ± 3dB
16	Fast switch RGB / CVBS or Y out	< 0.4V into 75Ω = CVBS > 1V / < 3V into 75Ω = RGB
17	Y/CVBS-out GND	
18	CVBS-in GND	
19	CVBS-out / Y-out	1Vpp ± 0.1V into 75Ω
20	CVBS-in	
21	Shield	

### 1.3.2 SCART 2 (Connected to AUX)

#### Pin Signals:

1	Audio-out R	1.8V RMS
2	Audio-in R	
3	Audio-out L	1.8V RMS
4	Audio GND	
5	Blue / Chroma GND	
6	Audio-in L	
7	Blue-in	
8	Function switch	
9	Green GND	
10	P50 control	
11	Green-in	
12	NC	
13	Red / Chroma GND	
14	Fast switch GND	
15	Red-in / Chroma-in	
16	Fast switch RGB / CVBS or Y in	
17	CVBS-out GND	
18	Y / CVBS-in GND	
19	CVBS-out	1Vpp ± 0.1V into 75Ω
20	CVBS-in / Y-in	
21	Shield	

**1.3.3 Audio/Video Front Input Connectors**

**Audio - Cinch**

Input voltage : 2.2Vrms  
Input impedance : > 10kΩ

**Video - Cinch**

Input voltage : 1Vpp ± 3dB  
Input impedance : 75Ω

**Video - YC (Hosiden)**

According to IEC 933-5  
Superimposed DC-level on pin 4 (load > 100kΩ)  
< 2.4V is detected as 4:3 aspect ratio  
> 3.5V is detected as 16:9 aspect ratio

Input voltage Y : 1Vpp ± 3dB  
Input impedance Y : 75Ω  
Input voltage C : 300mVpp ± 3dB  
Input impedance C : 75Ω

**1.3.4 Out 1**

**Component Video Cinch Y/Pb/Pr**  
according EIO-770-I-A, EIA-770-2

**Audio - Cinch**

Output voltage : 2Vrms max.  
Output impedance : > 10kΩ

**1.3.5 Out 2**

**Audio - Cinch**

Output voltage : 2Vrms max.  
Output impedance : > 10kΩ

**Video - Cinch**

Output voltage : 1Vpp ± 3dB  
Output impedance : 75Ω

**Video - YC (Hosiden)**

According to IEC 933-5  
Superimposed DC-level on pin 4 (load > 100kΩ)  
< 2.4V is detected as 4:3 aspect ratio  
> 3.5V is detected as 16:9 aspect ratio

Output voltage Y : 1Vpp ± 3dB  
Input impedance : 75Ω  
Output voltage C : 300mVpp ± 3dB  
Input impedance : 75Ω

**1.4 Digital Inputs / Outputs**

**1.4.1 Digital Output**

**Digital Audio – Coaxial / Optical**

LCM : according IEC 60958  
MPEG 1, MPEG 2, AC3 : according IEC 61937  
DTS : according IEC 61937 + addendum

**1.4.2 HDMI Output**

Type A connector (19 pins)

**1.4.3 Digital Video Input (IEEE 1394)**

**Implementation Standard according:**

IEEE Std 1394-1995  
IEC61883 - Part1  
IEC61883 - Part 2 SD-DVCR (02-01-1997)

Specification of consumer use digital VCR's using 6.3mm magnetic tape – dec.1994  
Mechanical connection according to Annex of IEC 61883-1

**1.4.4 G-Link (for IR-remote transmitting device)**

Output voltage : 5 ± 0.5V (high level)  
0.4 ± 0.3V (low level)  
Output impedance : 150Ω

**1.5 Video Performance**

All outputs loaded with 75Ω  
SNR measurements over full bandwidth without weighting.

**1.5.1 SCART (RGB)**

SNR : ≥ 55dB on all output  
Bandwidth : 4.8MHz -3dB

**1.6 Audio Performance**

**1.6.1 Cinch Output Rear**

Output voltage 2 channel mode : 2Vrms ± 2dB  
Channel unbalance (1kHz) : < 0.22dB  
Crosstalk 1kHz : > 100dB  
Crosstalk 16Hz-20kHz : > 87dB  
Frequency response 20Hz-20kHz : ± 0.5dB  
Signal to noise ratio (unweighted) : > 85dB  
Dynamic range 1kHz : > 83dB  
Distortion and noise 1kHz : > 83dB  
Distortion and noise 16Hz-20kHz : > 75dB  
Intermodulation distortion : > 70dB  
Mute : > 95dB

**1.6.2 Scart Audio**

Output voltage 2 channel mode : 1.6Vrms ± 2dB  
Channel unbalance (1kHz) : < 1dB  
Crosstalk 1kHz : > 85dB  
Crosstalk 16Hz-20kHz : > 70dB  
Frequency response 20Hz-20kHz : ± 0.5dB  
Signal to noise ratio (unweighted) : > 80dB  
Dynamic range 1kHz : > 75dB  
Distortion and noise 1kHz : > 75dB  
Distortion and noise 16Hz-20kHz : > 50dB  
Intermodulation distortion : > 70dB  
Mute : > 80dB

**1.7 Dimensions and Weight**

Height of feet : 5.5mm  
Apparatus tray closed : WxDxH:435x335x76mm  
Apparatus tray open : WxDxH:435x472x76mm  
Weight without packaging : 5kg  
Weight with packaging : 8kg

**1.8 Laser Output Power & Wavelength**

**1.8.1 DVD**

Output power during reading : 0.8mW  
Output power during writing : 20mW  
Wavelength : 650nm

**1.8.2 CD**

Output power : 0.3mW  
Wavelength : 780nm

## 1.9 Read / Write Speed

Type of Disc (Function)	Disc Rotation Speed
Read Speed CD	7X CAV
Read Speed DVD	4X CAV
Write Speed DVD+R/+RW	2.4X ZCAV
Write Speed DVD-R/-RW	2X

## 1.10 Commercial Difference

	DVDR5350H	DVDR7300H
HDD capacity	160GB	250GB
HDMI	–	x

## 1.11 Playability

		DVDR5350H	DVDR7300H
<b>Video Playback</b>			
1.	Disc Media: CD-R/-RW, MP3- CD, VCD/SVCD, DVD-Video, DVD+R/+RW, DVD-R/-RW	x	x
2.	Compression Format: MPEG1, MPEG2	x	x
<b>Audio Playback</b>			
1.	Disc Media: CD, CD-R/-RW, MP3-CD	x	x
2.	Compression Format: Dolby Digital, MP3, MPEG2 Multi- channel, PCM	x	x
3.	MP3 bit rates: 32- 256 kbps and VBR	x	x
<b>Still Picture Playback</b>			
1.	Disc Media: Picture CD	x	x
2.	Picture Compression Format: JPEG	x	x

## 2. Test Disc & Repair Hints

### 2.1 Test Disc

- |    |                |                          |
|----|----------------|--------------------------|
| 1) | 7104 099 96611 | CD-RW printed Audio Disc |
| 2) | 9965 000 25728 | DVD Player Test Pack     |
| 3) | -              | Blank DVD+RW             |
| 4) | -              | Blank DVD-RW             |

### 2.2 Open the DVD Tray manually

**Note:** This procedure needs to be performed on condition that:

- a customer's Disc is jammed in the DVD Tray
  - the DVD Tray cannot be open via the normal open/close button on the set.
- 1) Place the set on the table with the bottom faced upwards as shown below.
  - 2) Insert a screw driver into the slot and open the DVD Tray by sliding the screw driver in the direction shown.

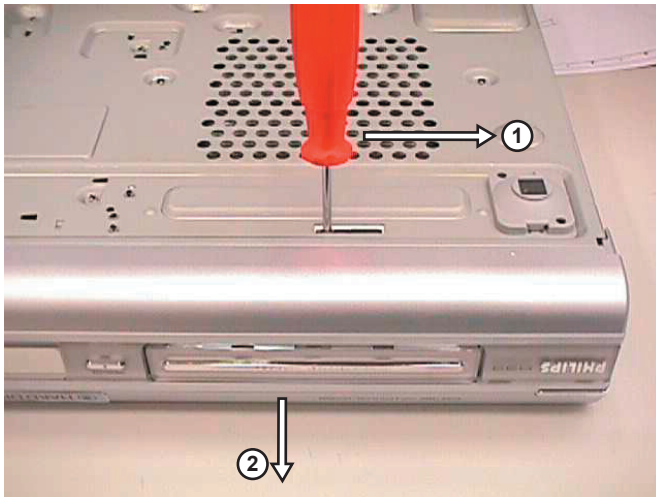


Figure 2-1

## 3. Firmware Upgrading

### 3.1 Firmware Upgrading

#### A. Preparation to upgrade firmware:

1. Unzip the zip-archive file
2. Start the CD Burning software and create a new CD project (data disc) with the following settings:
  - File system : Joliet
  - Format : MODE 2: CDROM XA
  - Recording mode : SINGLE SESSION (TRACK-AT-ONCE), FINALIZED CD

Note: Long file name is necessary for the preparation of the upgrade disc

3. Place the content of the zip-archive into the root directory of the new CD project.
4. Burn the data onto a blank CDR or CD-RW

#### B. Procedure to apply the firmware upgrade:

1. Hold the <Record> + <Next> buttons down and Power up the set.
2. The tray opens and set will display:

**DOWNLOAD ->.....INSERT DISC**

3. Insert the prepared Upgrade CDROM and close the tray.
4. The set will display:

**INIT DISC -> DOWNLOAD ->.....**

The whole process takes less than 10 minutes

Note: Do not press any buttons or interrupt the mains supply during the upgrading process, otherwise the set may become defective.

5. When the upgrade is completed the tray will open automatically and the set will display:

**REMOVE DISC**

6. Close the tray and the set will display:

**DONE**

7. The set will go into Standby mode.

#### C. How to read out the firmware version to confirm set has been upgraded:

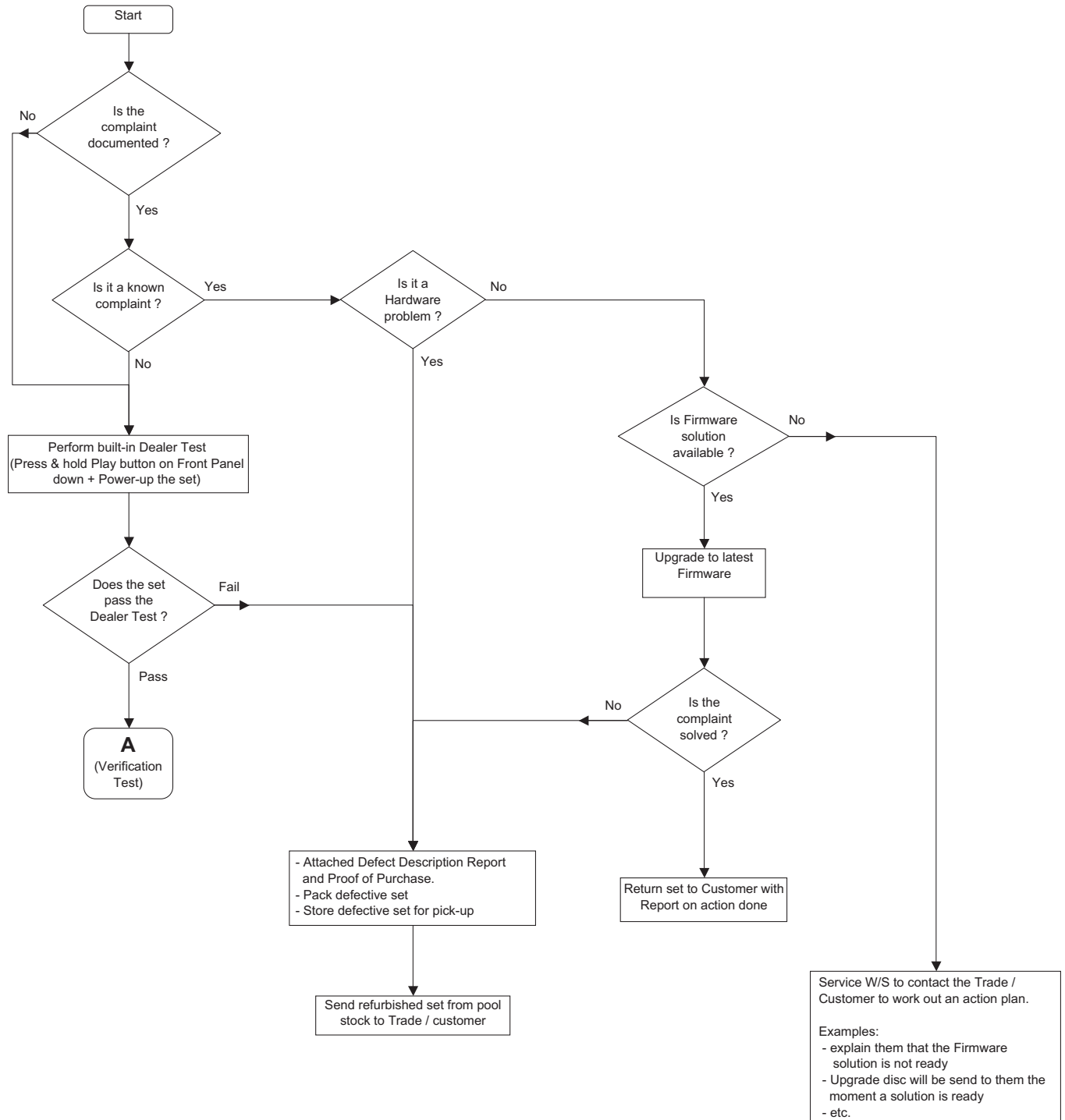
1. Power up the set.
2. Press <System> button on the Remote control and select {Setup} option
3. Press <Right> button to select {System}
4. The set will prompt you about clearing the Time Shift Buffer
5. Select {Yes} and press <OK> button
6. Press <Down> button several times to select {Version info}
7. Press <OK> button
8. The TV connected to the set will display:

**DIF05\_5/56299AN SV11201  
BE 43.2.13 ASP1,18,1,10FP  
SIT5300-FNAC6-S3\_299-F536\_B1  
20050909-1857 dev sxc  
EPG:DPMS:P\_DPM**

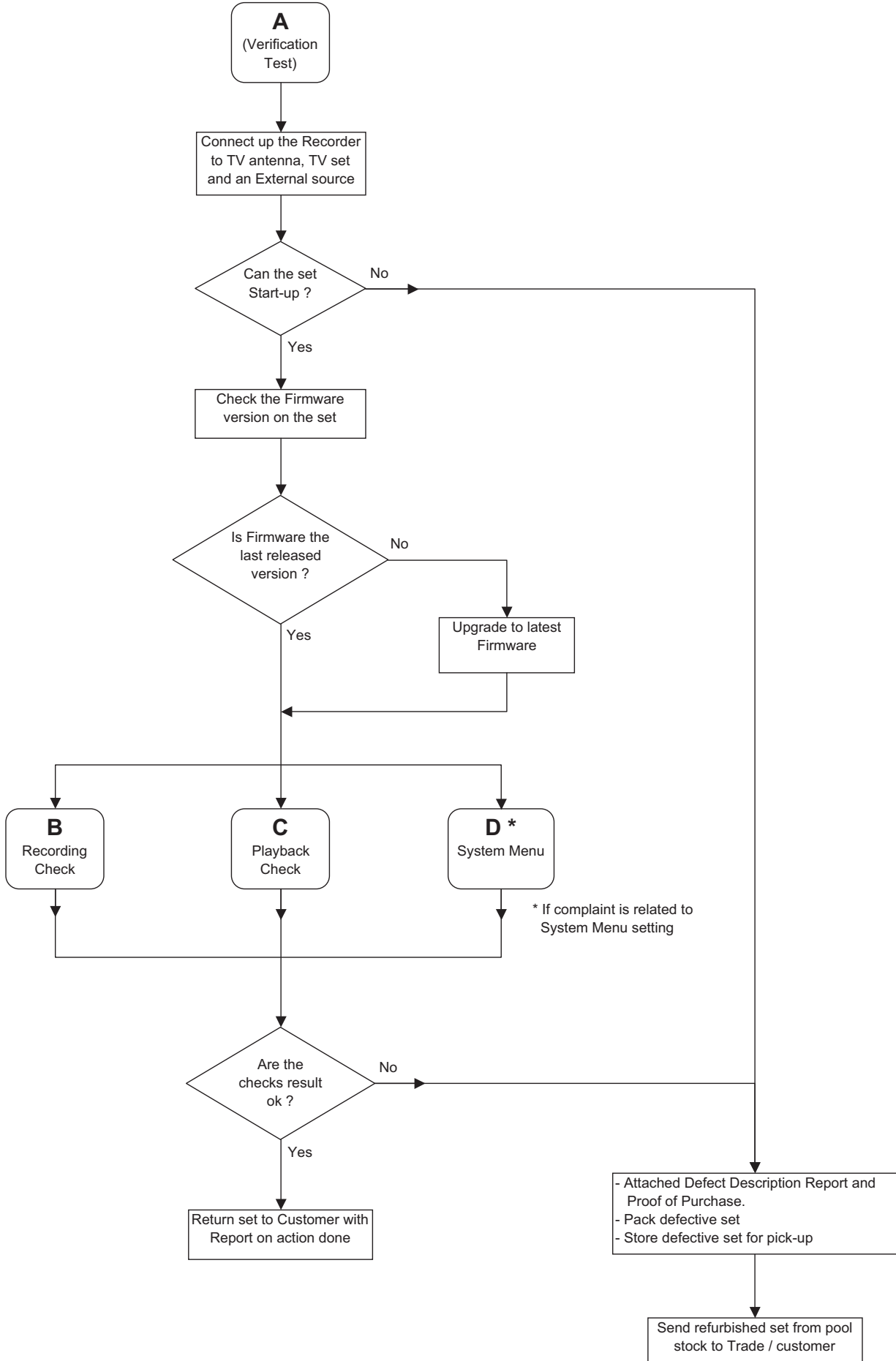
9. Press <System> button to exit

# 4. Service Flow Chart

## 4.1 Start Process

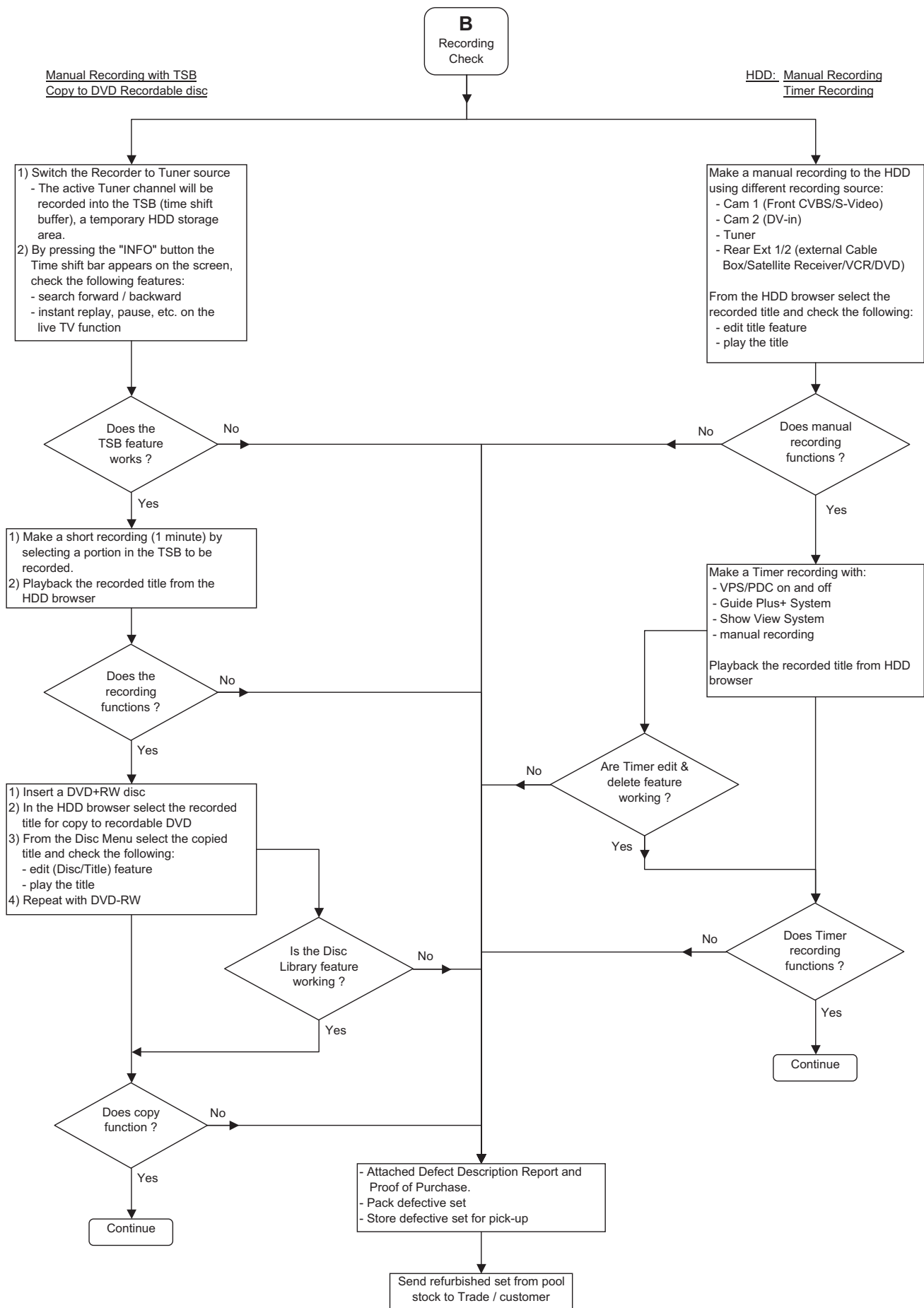


4.2 Verification Process

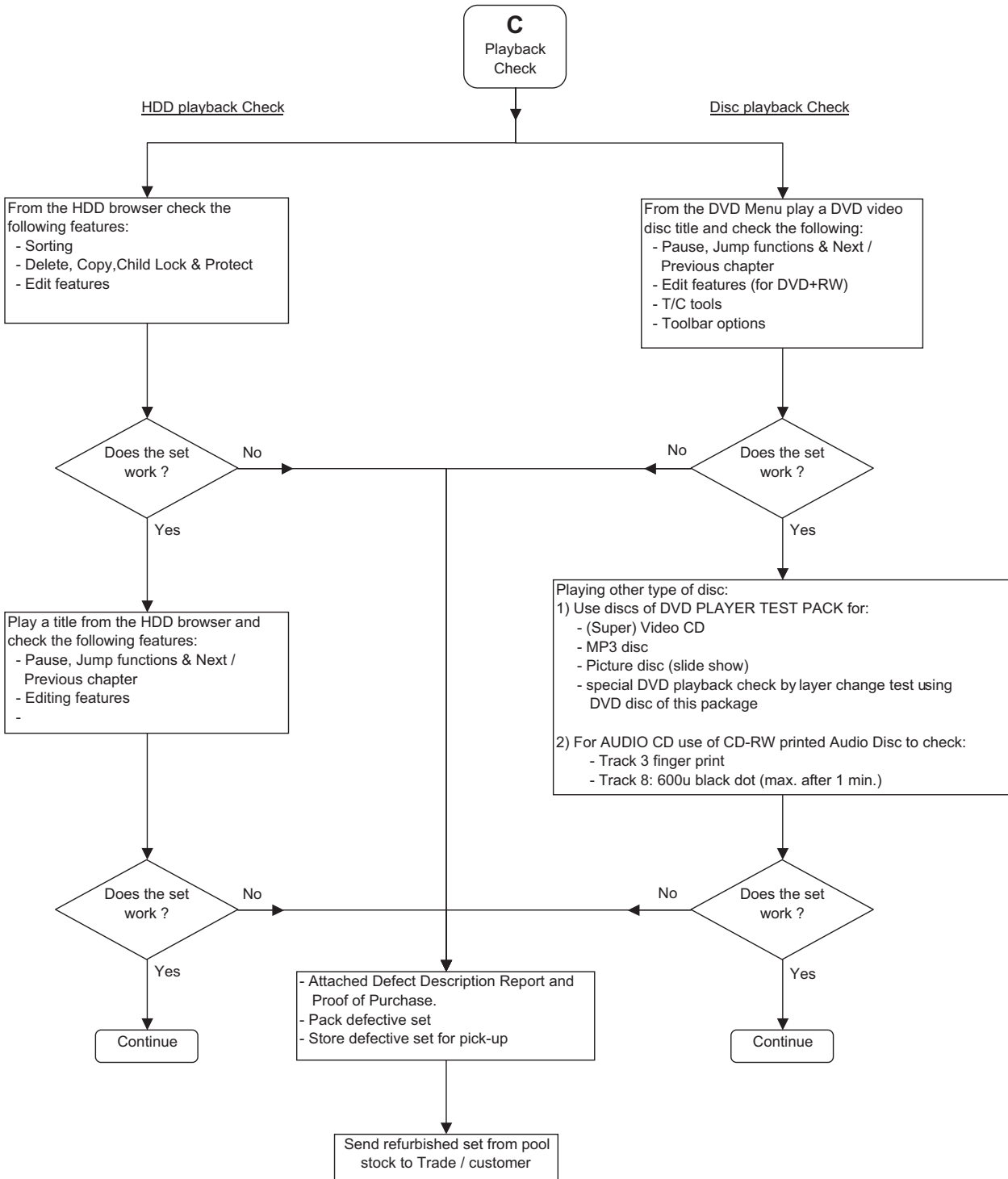




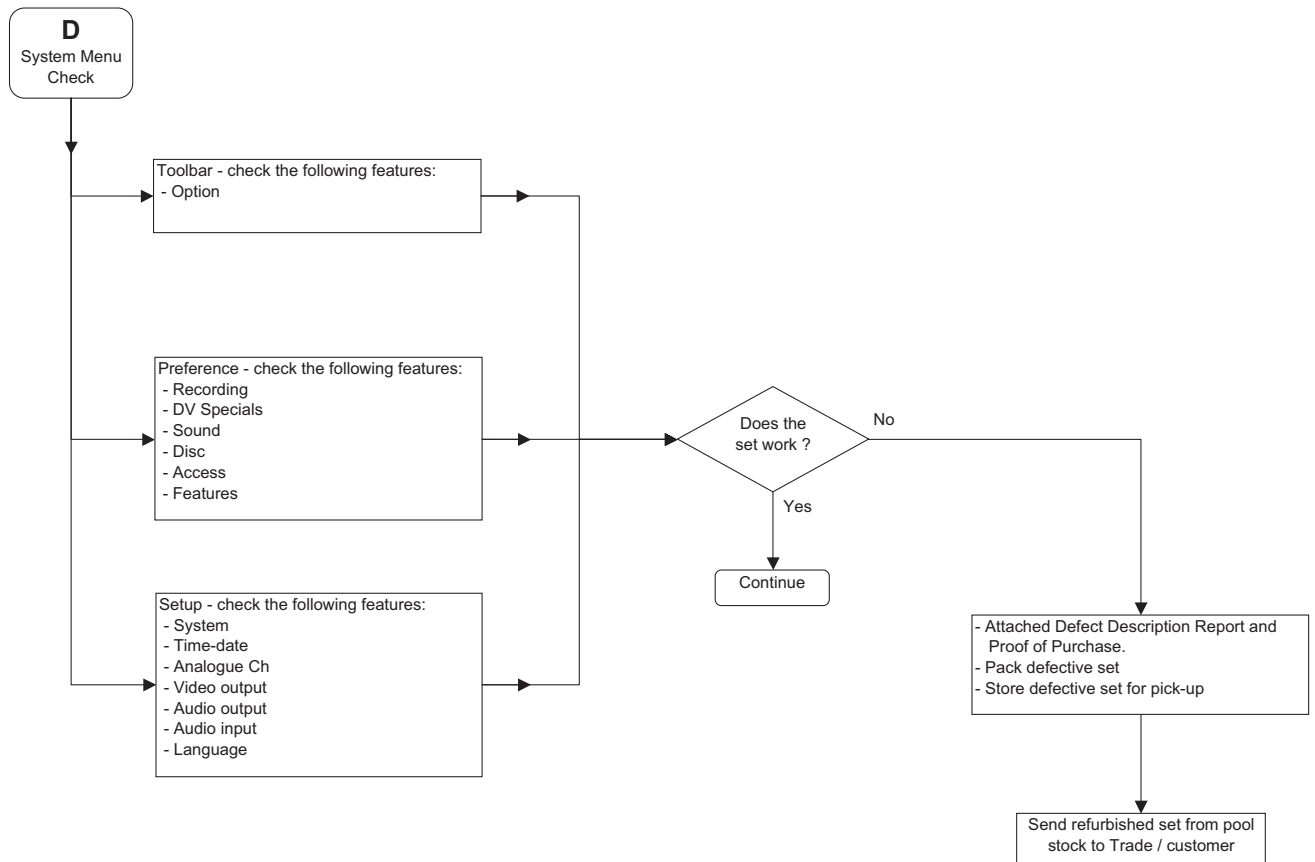
4.3 Recording Process



4.4 Playback Process



## 4.5 System Menu Process



# 5. Directions For Use

The following excerpt of the Quick Use Guide serves as an introduction to the set. The Complete Direction for the Use can be downloaded in different languages from the internet site of Philips Customer care Center: [www.p4c.philips.com](http://www.p4c.philips.com)

## I Connect

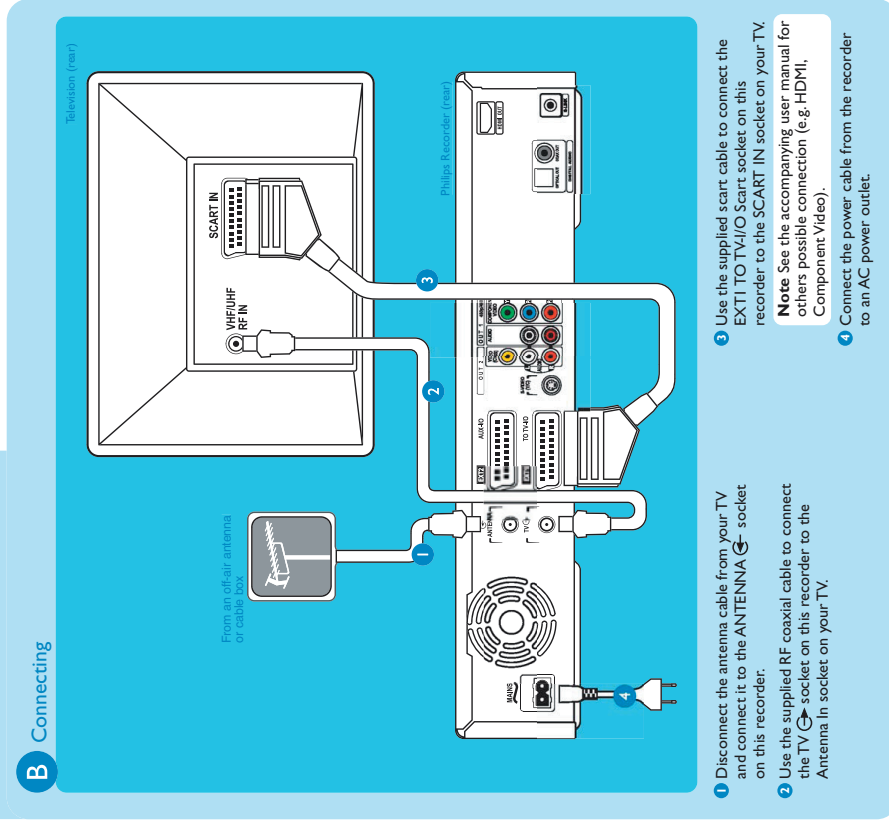
Start with the 'Basic connection'. If you have a VCR, follow the instructions for 'Connection with VCR or similar device'. If you have a set-top box, follow the instructions for 'Connection with set-top box'.

### Basic connection

#### A Before connecting

Unplug the antenna cable that is currently connected to your TV.

#### B Connecting



DVDR 7300H

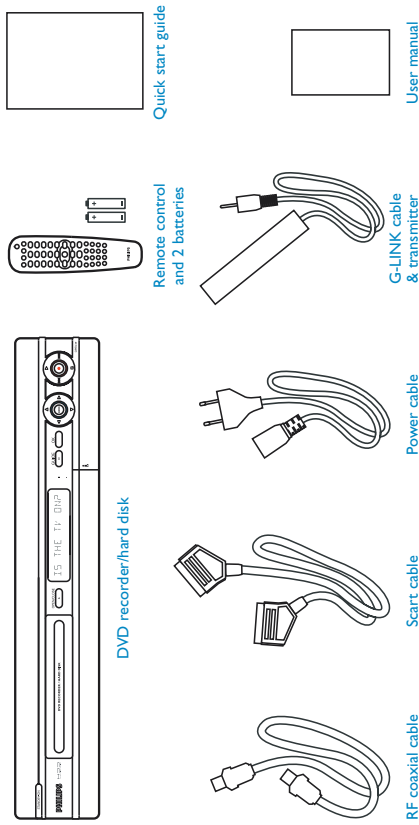
HDD & DVD Player / Recorder

# Quick Start Guide



- 1 Connect
- 2 Set up
- 3 Enjoy

### What's in the Box

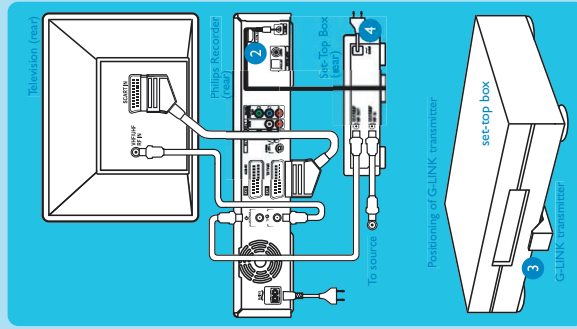


# 2 Set up

## Connection with set-top box

Your new Philips Recorder provides a G-LINK transmitter which allows you to control the tuner of the set-top box (satellite receiver, cable TV box) through the GUIDE Plus+ system. You can record the TV programmes that are received through the set-top box.

### Connecting



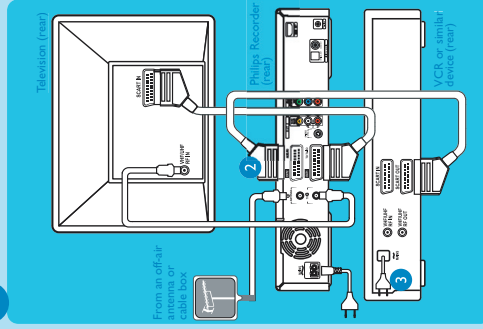
- 1 Follow step 1 to 4 of 'Basic connection' to connect this recorder before you proceed to step 2 below.
- 2 Connect the supplied G-LINK cable to the G-LINK socket on this recorder.
- 3 Place the G-LINK transmitter in front of your set-top box in such a way that it can acquire the signal broadcasted by the transmitter.
- 4 Connect the power cable from the set-top box to an AC power outlet.

## Connection with VCR or similar device

### A Before connecting

Your new Philips Recorder replaces the VCR for your recording needs. First, unplug all the connections from your VCR.

### B Connecting

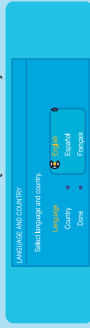


- 1 Follow step 1 to 4 of 'Basic connection' to connect this recorder before you proceed to step 2 below.
- 2 Use another scart cable (not supplied) to connect the EXT2 AUX-I/O Scart socket on this recorder to the SCART OUT socket on your VCR.
- 3 Connect the power cable from the VCR to an AC power outlet.

**Note** In this setup, the VCR cannot record TV programmes.

## A Finding the viewing channel

- 1 Press **STANDBY-ON** on the recorder. The recorder will display 'IS THE TV ON?'.
- 2 Switch on the TV. You should see the { EASY SETUP } menu.



**Note** If connected to your VCR, make sure it is turned off before proceeding.

- 3 If not, press the Channel Down button on your TV's remote control repeatedly (or AV, SELECT button) until you see the menu. This is the correct viewing channel for the recorder.

## B Start basic setup

Use the recorder's remote control and follow the on-screen instructions to complete the installation.

- 1 Select the desired menu language, your country and the TV shape.
- Note** Select { Done } in the menu and press **OK** to go to the next screen.
- 2 Activate automatic channel search.
- 3 Check the date and time and press **OK**.
- 4 To continue with the GUIDE Plus+ installation, select { Continue } and press **OK**. Otherwise, select { Do not install now } and press **OK**. Wait until the recorder has finished initialising the system, then press **OK** again.

## D Install the set-top box

If you do not have a set-top box, skip 'D' and go to 'E'.

- 1 Press **DOWN** to select 'External Receiver 1' and press **OK**.
- 2 Press **OK** again to continue.
- 3 Select the type of reception, service provider and brand name of the connected set-top box.

**Note** Press **OK** to go to the next screen. Select { None } if none of the entries are applicable.

- 4 Select the recorder socket through which your set-top box is connected (e.g. 'EXT2' for EXT2 AUX-I/O socket) and press **OK**.
- 5 Turn on your set-top box and select channel number **02** on the set-top box.
- 6 Read the instructions on the TV and press **OK**.



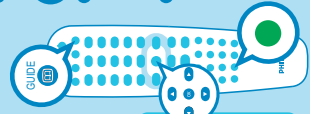
- 7 The recorder will now attempt to change the set-top box's channel through the G-LINK transmitter. If the set-top box has switched to the same programme number as displayed on the TV, select { Yes } in the menu and press **OK**.

**Note** If not, select { No } and press **OK** to try a different code.

- 8 Your set-top box is now installed.

## E Load the TV listing data

- 1 Press the **GREEN** button to leave the menu.
- Note** To switch the GUIDE Plus+ system's host channel manually, go to { Host Channel Setup }.
- 2 Press **GUIDE** to exit the GUIDE Plus+ system. Leave the recorder in 'standby' mode and turn on the set-top box overnight to collect the TV listing data, this may take up to 24 hours.
- Note** If you tune to your Host Channel before going to 'standby' mode, this recorder will start immediately to download the TV listings data.
- 3 Check the { Editor } screen the next day to ensure the source and programme numbers are matching for all channels.



## C Install the GUIDE Plus+ system



- 1 Enter your language, country and postal code to change, press **OK** and follow the on-screen instructions.

# 3 Enjoy

## Watch TV - Pause live TV

Your Philips Recorder allows you to control the TV programme. You can PAUSE it as if you were in control of the live broadcast.

- 1 Turn on your recorder and press **CHANNEL** + / - to select a TV programme.
- 2 Press **PAUSE** (⏸) to suspend it.
- 3 Press **PLAY** (▶) to continue.

**Note** When the recorder is turned on, the programme you are watching will be stored in the temporary hard disk storage. When you switch the recorder to another input signal (e.g. CAM) or to standby mode, the programme will be erased.

- 4 Press **TUNER** (📡) to return to the live broadcast.

## Record to hard disk

### A Contents in the temporary HDD storage



- 1 Press **INFO** (i) to see what is temporarily stored in the hard disk storage.
- 2 Press **UP** (↑) or **DOWN** (↓) to choose the title you want to record.
- 3 Press **REC** (📺) to record the title.

**Note** The title will be marked in red and the recording will only take effect when you turn off the recorder.

### B Current TV programme

- 1 Press **REC** (📺) to start recording. It can record up to 6 hours.

**Note** To set the recording time, press **REC** (📺) repeatedly to extend the recording time in 30 minutes increments for up to 6 hours. If the GUIDE Plus+ system is available, 'Record 1 program' is displayed and the current programme will be recorded.

- 2 Press **STOP** (⏹) to stop the recording immediately.

## Start playback

### A From the hard disk



- 1 Press **HDD-BROWSER** (📁) then press **RIGHT** (→) until you see the { TITLES } and { INFO } menus.
- 2 Press **UP** (↑) or **DOWN** (↓) to select a title.
- 3 Press **PLAY** (▶) to start playback.

### B From a disc



- 1 Hold down the **STOP** (⏹) until the disc tray opens, load in a disc and close the disc tray.
- 2 If the content menu appears, press **RIGHT** (→) until you see the { TITLES }, { TRACKS } or { PHOTO ROLLS } menu, depending on the disc type.
- 3 Press **UP** (↑) or **DOWN** (↓) to select a title.
- 4 Press **PLAY** (▶) to start playback.

Record Mode	HDD (256GB)	DVDR/DVDRW	DVDR-K Double Layer
HQ	47	1	1hr-55mins
SP	95	2	3hr-40mins
BP	143	2.5	4hr-35mins
EP	191	4	3hr-20mins
SLP	287	6	11h-05mins
SEP	400	8	14h-45mins

Hours of recordings can be stored on the HDD or an empty DVD recordable disc.

## Using the GUIDE Plus+ system

Makes sure that the TV listing data download is completed.



### A Record TV programmes

- 1 Press **GUIDE** (📺).
- 2 Press **DOWN** (↓) to select a TV channel.
- Note** Press the **YELLOW** (🟡) to see an overview of all the available channels and choose from there.
- 3 Press **RIGHT** (→) or **LEFT** (←) to select a TV programme.
- Note** Press **DAY** (☉) or **DAY+☉** to go directly to a day before or the next day TV listings.
- 4 Press the **RED** (🔴) button to set the highlighted programme for recording.

**Note** You can store up to 25 programmes for recording.

### B Search TV programmes

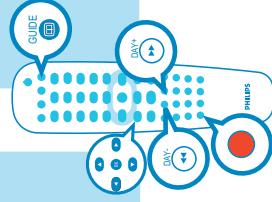
- 1 Press **UP** (↑) until you highlight the menu bar (Grid, Search, My TV, etc).
- 2 Highlight { Search } and press **DOWN** (↓).
- 3 Press **RIGHT** (→) or **LEFT** (←) to select a search category and press **DOWN** (↓).



- 4 Press **DOWN** (↓) to select a sub-category and press (⏹) to start the search.



**Note** If 'No programme found' appears, that means there are no programmes of that category for that day.



## Need help?

**GUIDE Plus+ system**  
Go to [www.europe.guideplus.com](http://www.europe.guideplus.com)

**User Manual**  
See the user manual that came with your Philips Recorder

**Online**  
Go to [www.philips.com/support](http://www.philips.com/support)



Be responsible  
Respect copyrights



2005 © Koninklijke Philips N.V.  
All rights reserved.  
12 NC 31 39 246 | 8511  
[www.philips.com](http://www.philips.com)