

Service  
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DVDR3330H/02/05/19/51 & DVDR5330H/02/05/19



# Service Instruction



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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 2) and upgrade if it is not the latest version.
3. Full functional check

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# 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	: < 6 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)	: -5dB 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)	: ≤ 0.5%

#### 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 / Chroma-in	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	< 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 / Chroma-out	300mVpp ± 3dB
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	
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 : 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 Audio/Video Output rear Connectors**

**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 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

**1.5 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 : 1.8Vrms ± 2dB  
 Channel unbalance (1kHz) : < 1dB  
 Crosstalk 1kHz : > 85dB  
 Crosstalk 20Hz-20kHz : > 70dB  
 Frequency response 20Hz-20kHz : ± 0.5dB  
 Signal to noise ratio (unweighted) : > 80dB  
 Dynamic range 1kHz : > 75dB  
 Distortion and noise 1kHz : > 70dB  
 Distortion and noise 20Hz-20kHz : > 55dB  
 Intermodulation distortion : > 70dB  
 Mute : > 85dB  
 Outband attenuation (above 30kHz): > 40dB

**1.6.2 Scart Audio**

Output voltage 2 channel mode : 1.4Vrms ± 2dB  
 Channel unbalance (1kHz) : < 1dB  
 Crosstalk 1kHz : > 85dB  
 Crosstalk 20Hz-20kHz : > 70dB  
 Frequency response 20Hz-20kHz : ± 0.5dB  
 Signal to noise ratio (unweighted) : > 80dB  
 Dynamic range 1kHz : > 75dB  
 Distortion and noise 1kHz : > 70dB  
 Distortion and noise 20Hz-20kHz : > 55dB  
 Intermodulation distortion : > 70dB  
 Mute : > 85dB  
 Outband attenuation (above 30kHz): > 40dB

**1.7 Dimensions and Weight**

Height of feet : 5.5mm  
 Apparatus tray closed : WxDxH:435x340x65mm  
 Apparatus tray open : WxDxH:435x477x65mm  
 Weight without packaging : 4.3kg  
 Weight with packaging : 6.0kg

**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**

	DVDR3300H	DVDR3330H	DVDR5330H
HDD capacity	80GB	160GB	250GB

## 1.11 Playability

		DVDR3300H	DVDR3330H	DVDR5330H
<b>Video Playback</b>				
1.	Disc Media: CD-R/-RW, MP3- CD, VCD/SVCD, DVD-Video, DVD+R/+RW, DVD-R/-RW	x	x	x
2.	Compression Format: MPEG1, MPEG2	x	x	x
<b>Audio Playback</b>				
1.	Disc Media: CD, CD-R/-RW, MP3-CD	x	x	x
2.	Compression Format: Dolby Digital, MP3, MPEG2 Multi- channel, PCM	x	x	x
3.	MP3 bit rates: 80- 320 kbps	x	x	x
<b>Still Picture Playback</b>				
1.	Disc Media: Picture CD	x	x	x
2.	Picture Compression Format: JPEG	x	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.

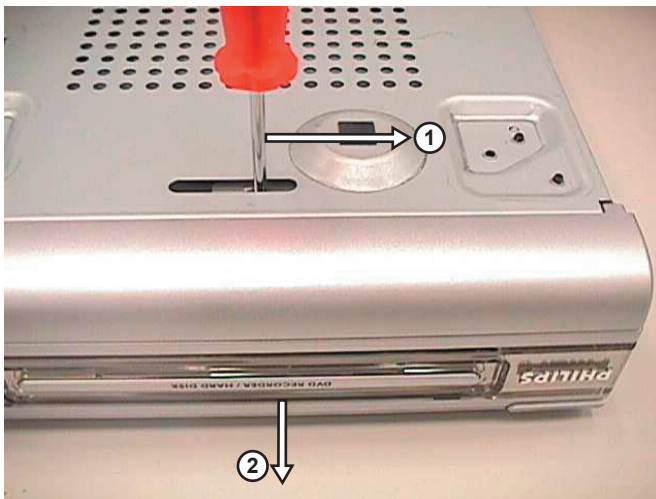


Figure 2-1

## 3. Firmware Upgrading

All new firmware will be published via symptom/cure information at AYS website:  
[www.atyourservice.ce.philips.com](http://www.atyourservice.ce.philips.com)

### 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 to go into "Forced Download". The tray door opens automatically and the display shows:

**DOWNLOAD ->.....PUT DISC**

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

**READING -> 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.

4. When the upgrade is completed the tray opens automatically and the set will display:

**REMOVE**

5. Remove the Upgrade CDROM and close the tray. The display shows:

**DONE**

6. The set switches automatically into Standby mode. Power off the set to complete the download process.

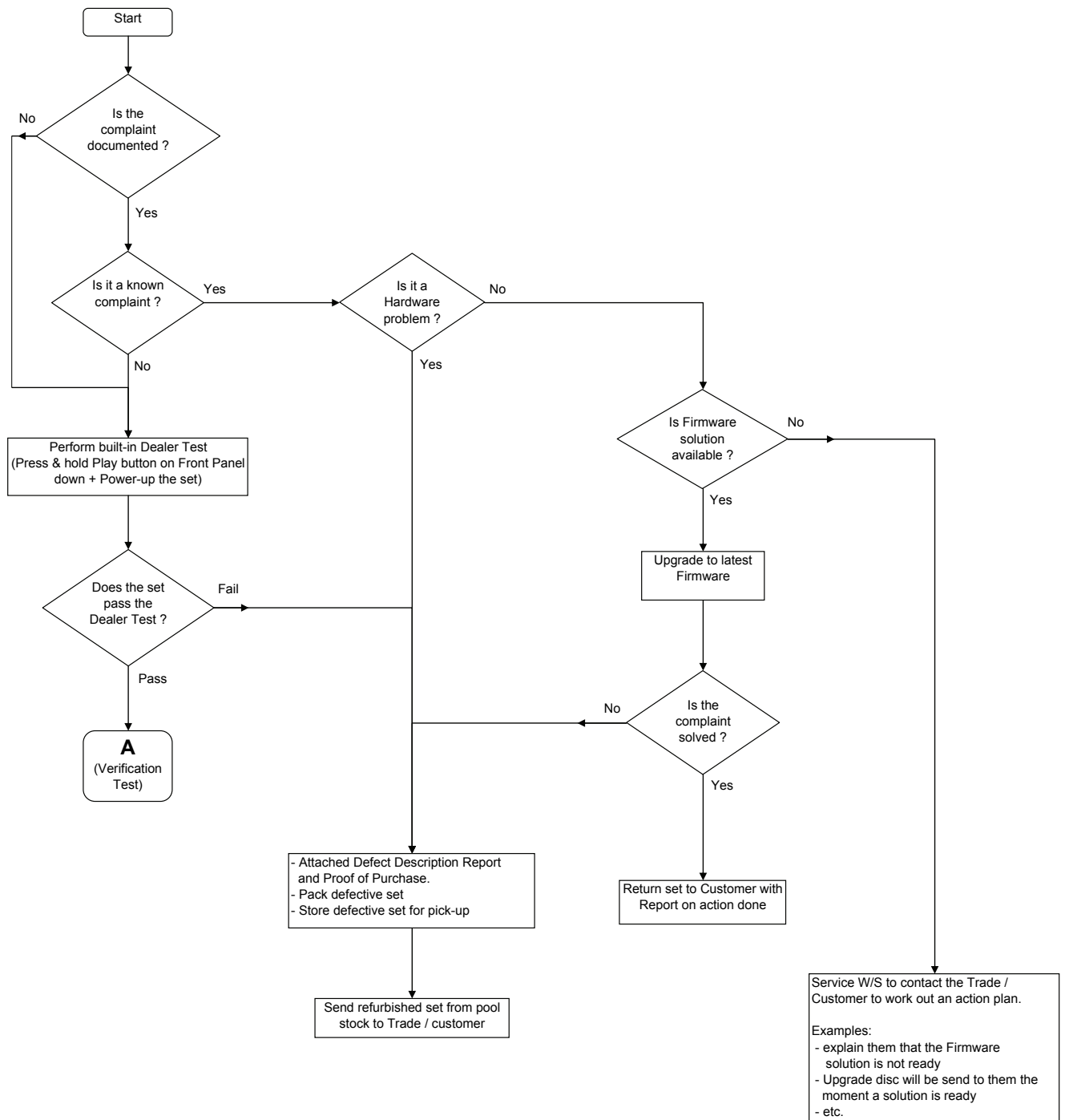
### C. How to read out the firmware version to confirm set has been upgraded.

1. Power up the set
2. Press <System menu> button on the Remote control and select {Feature} option
3. Press <Right> to select {Access Control option}
4. Press <1> <5> <9> <6> buttons in sequence
5. The TV connected to the set will display:

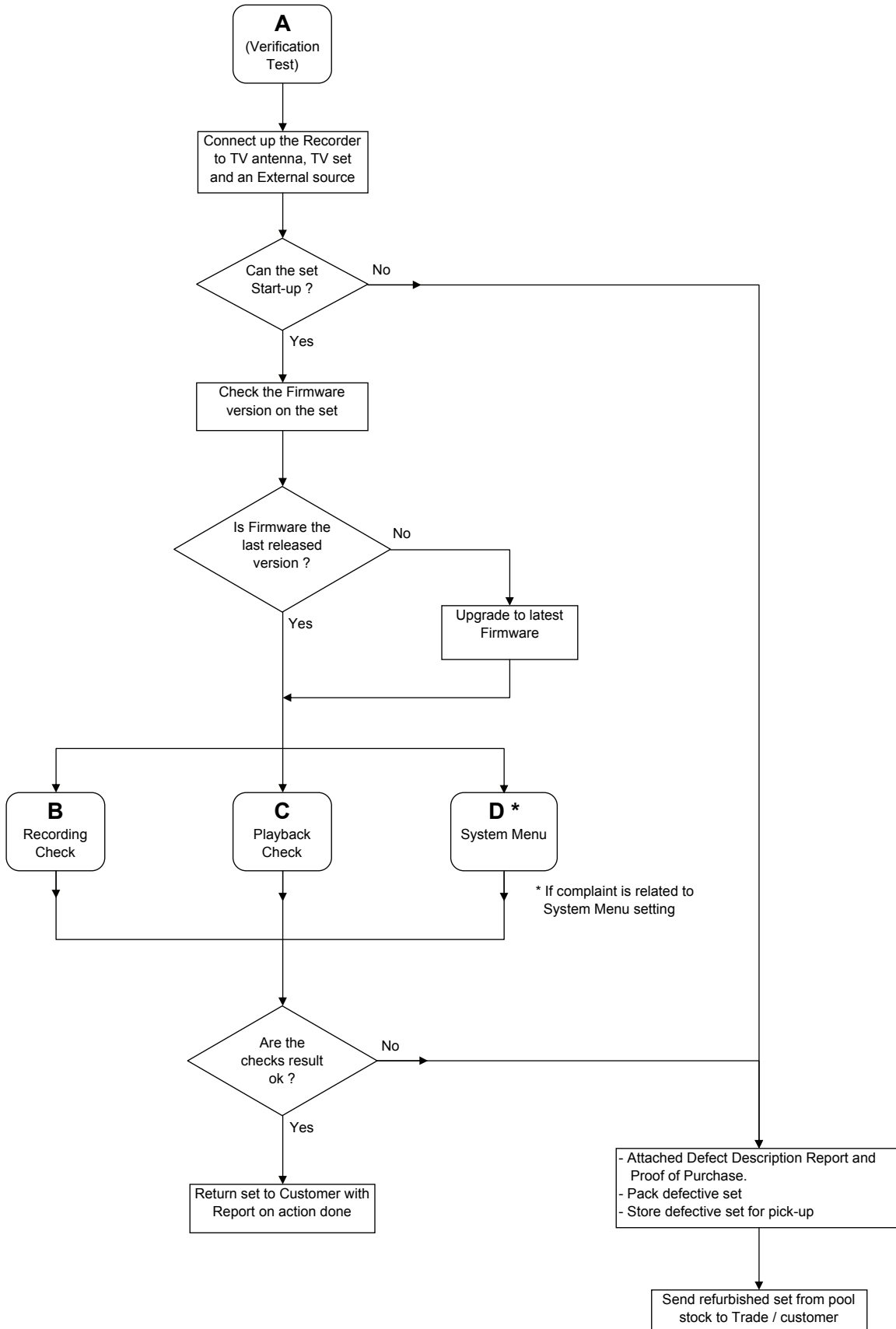
**AB 1.18.1.9 DB F05\_4/53117  
 BE 43.2.14 SV 11203 DV 1234567890  
 BASE 52\_221\_20050730 dev sxc 3300h rad\_int  
 SpectraCORE 3300v1.13**

## 4. Service Flow Chart

### 4.1 Start Process

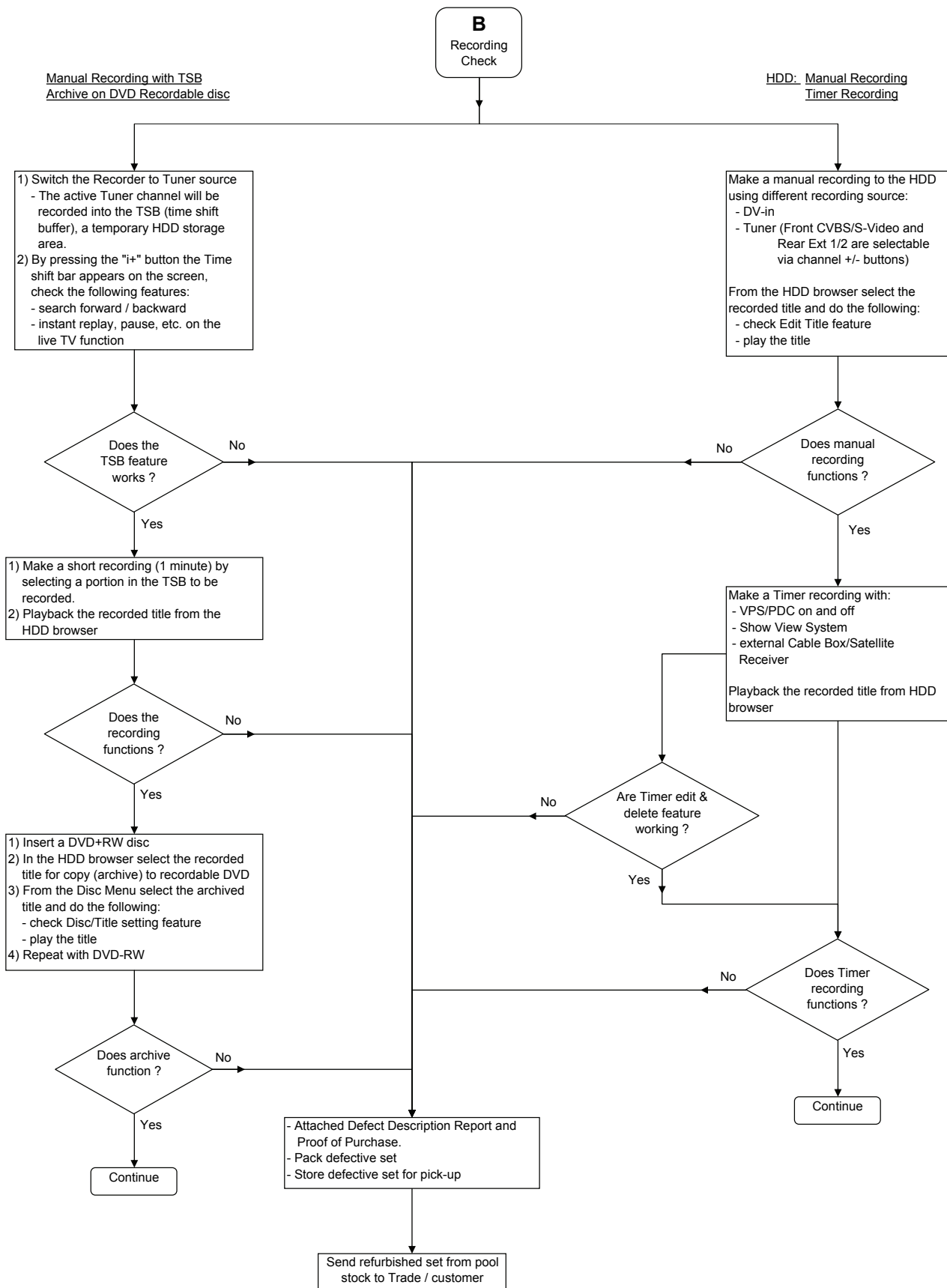


4.2 Verification Process

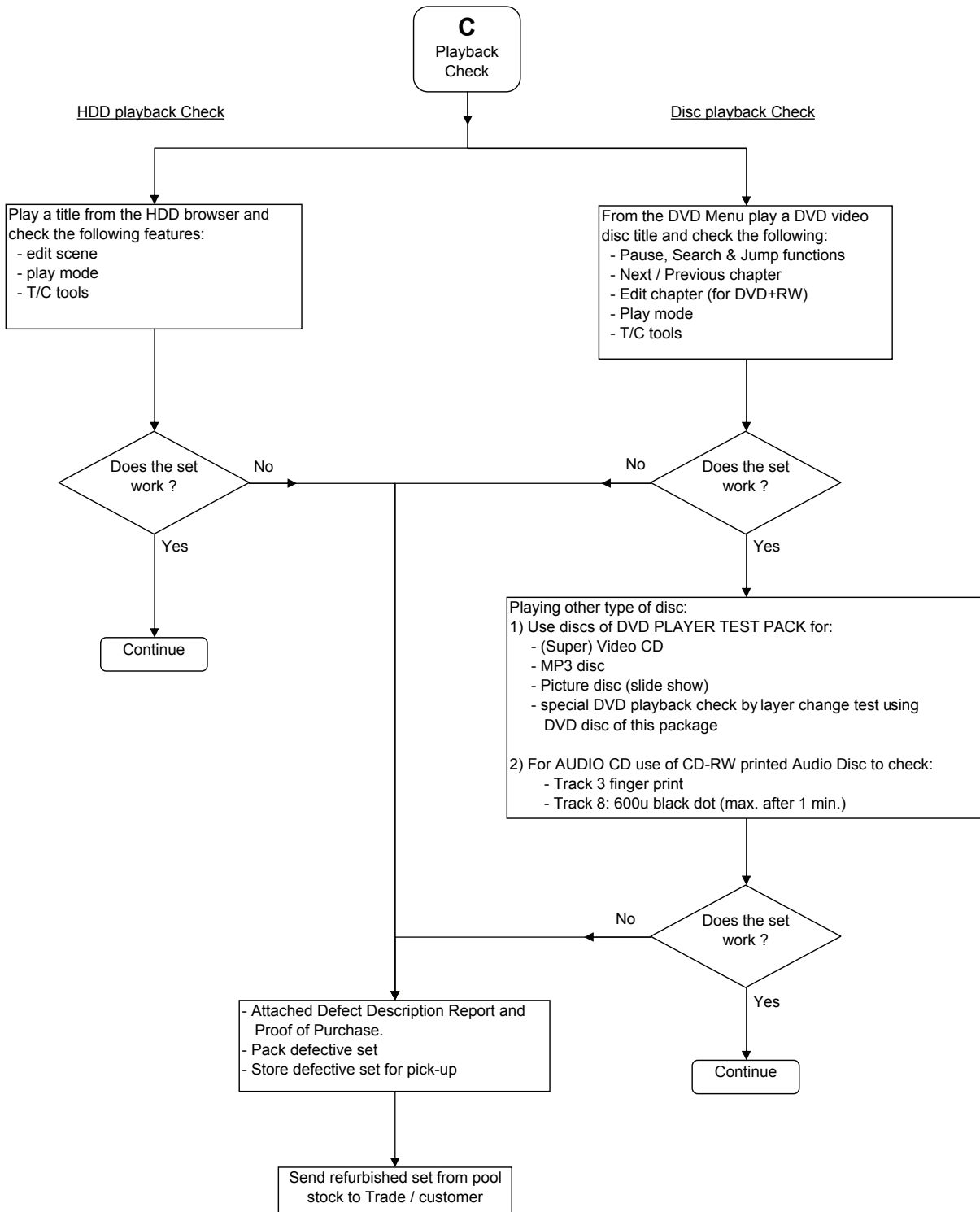




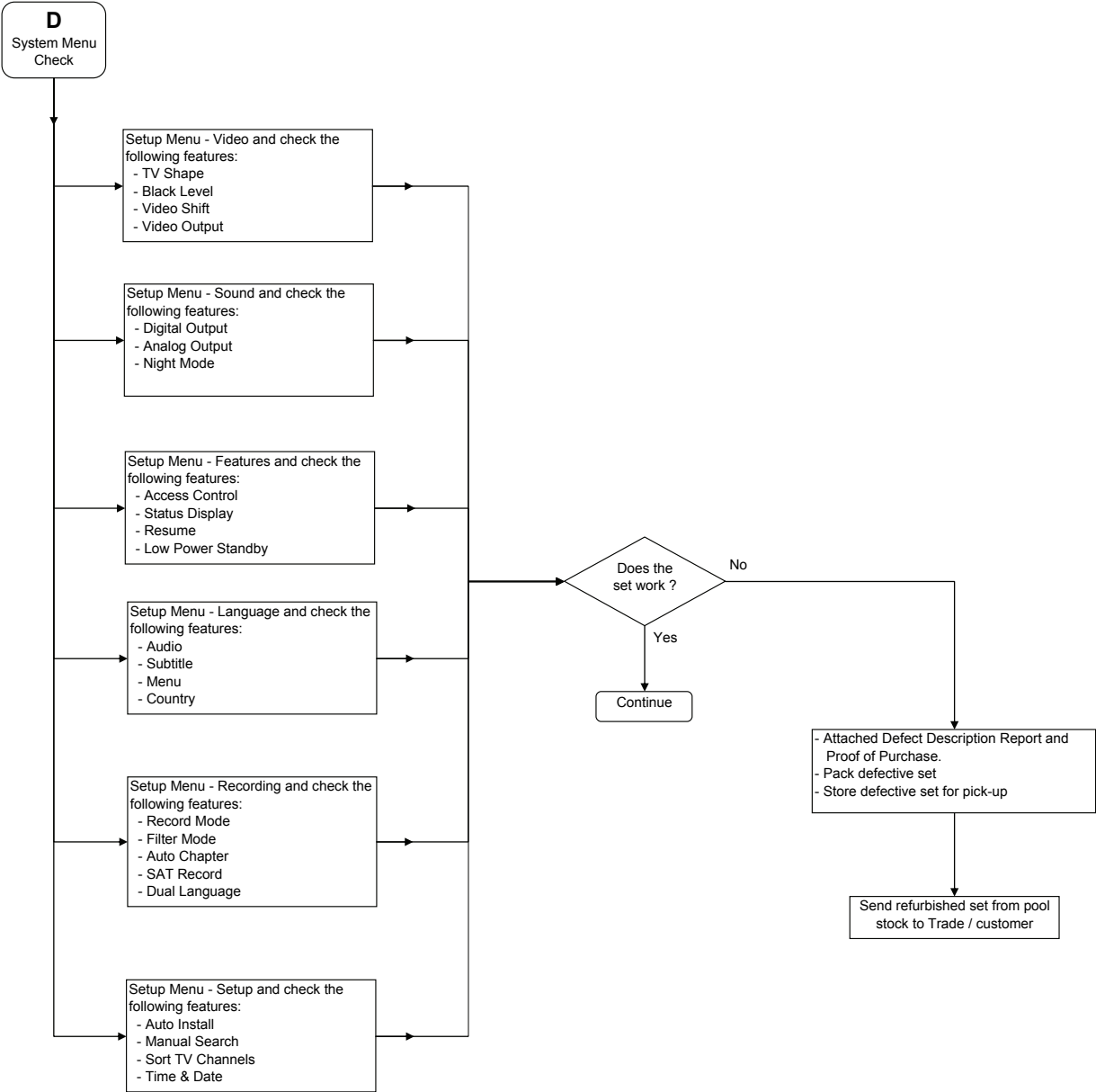
4.3 Recording Process



4.4 Playback Process



4.5 System Menu Process

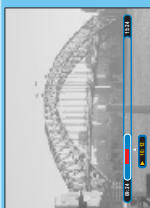


Hard Disk/DVD Recorder

DVDR 3300H  
 DVDR 3330H  
 DVDR 5330H

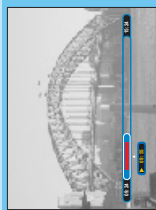
# 3 Enjoy

## Recording to hard disk



- 1 Press **INFO** and a bar representing what is temporarily stored will appear.
- 2 Press **PREVIOUS** or **NEXT** to search for where you want to start recording.  
**Tip** You can also press **JUMP BACK**, **JUMP FWD** or press and hold **PREVIOUS** or **NEXT**.
- 3 Press **REC**.
- 4 Key in the time period to record or press **REC** again for a 30 minutes recording.  
**Tip** Each time you press **REC** another 30 minutes recording time is added.

## Play recording while recording it



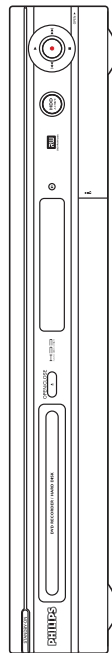
- 1 Press **PREVIOUS**, a bar representing what is temporarily stored will appear with the recording marked in red, continue to press **PREVIOUS** to go back to the part of the recording you want to watch and the recorder will start playing from there.
- 2 Press **TUNER** to go back to the live TV broadcast.  
**Tip** You can pause and jump forward or backward of what you have already recorded without interfering with the recording.

# Quick Start Guide

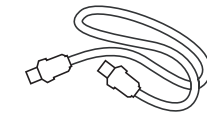


- 1 Connect
- 2 Set Up
- 3 Enjoy

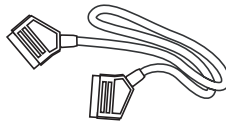
## What's in the Box



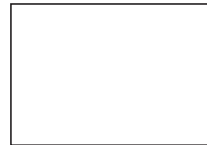
Hard disk/DVD recorder



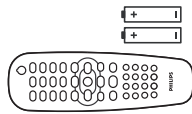
RF coaxial cable



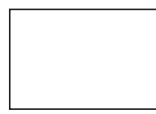
SCART cable



Quick start guide



Remote control and 2 batteries



User manual

## Troubleshooting

For more troubleshooting tips, see the user manual.

### Problem

Remote control

### Tip

- Aim remote control at recorder (not TV) or remove any obstacles in the way.
- Batteries are weak; replace the batteries.
- The child lock is on. Refer to user manual to unlock it.
- Wrong region code. The DVD must be coded for ALL regions or Region 2.
- Check if the disc is defective, scratched or warped. Clean the disc or try another disc.
- The disc does not match the TV colour system standard (PAL/NTSC).
- When playing DVD set Record Mode to high-quality speed to improve picture quality.
- Channel you are recording is not stored or the wrong programme number is selected.
- If you adjust the clock after you set a timer recording, reset the timer recording.
- The recorder cannot duplicate copyrighted material onto a recordable DVD.
- A finalised DVD+R has been inserted. Change disc.

Disc does not play

The picture is distorted

Recordings are not occurring as scheduled. New recordings cannot be made.

## Need help?

### User Manual

See the user manual that came with your hard disk/DVD recorder

### Online

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



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 12 NC 31 39 246 17151  
[www.philips.com](http://www.philips.com)

# PHILIPS

# 1 Connect

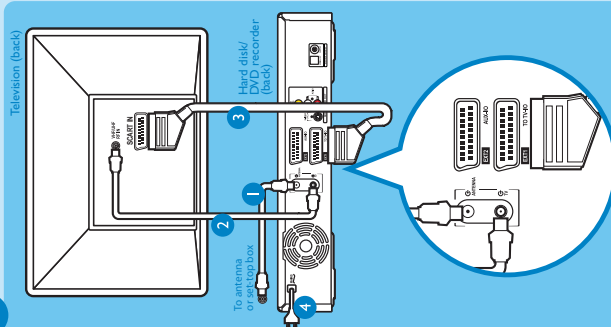
If you have a VCR, follow the instructions for 'Connection with VCR or similar device', if you don't have a VCR follow the instructions for 'Connection without VCR'.

## Connection without VCR

### A Before connecting

Your TV should be connected to the cable box/sec-top box, satellite receiver or aerial, unplug the antenna cable from the TV.

### B Connecting



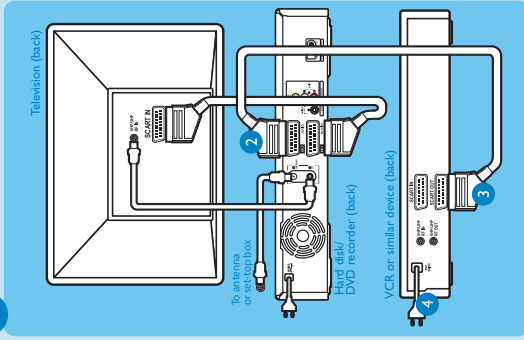
- 1 Connect the antenna cable (plugged out from the VCR or TV) to the ANTENNA IN socket at the rear of the recorder.
- 2 Connect the supplied RF coaxial cable into the TV ANTENNA IN socket at the rear of the recorder and into the Antenna In socket of the TV.
- 3 Connect the SCART cable to the SCART IN socket of the recorder and to the EXTI socket at the rear of the TV.
- 4 Plug in the power cable from the recorder to an AC power outlet.

## Connection with VCR or similar device

### A Before connecting

Your new Philips hard disk/DVD recorder can replace the VCR for all your recording needs, just unplug all the connections from your VCR.

### B Connecting



- 1 Follow steps 1 to 4 of 'Connecting' under 'Connection without VCR' to connect the recorder before you proceed to step 2 below.
- 2 Connect another SCART cable (not supplied) into the EXT2 AUX I/O SCART socket at the rear of the recorder.
- 3 Connect the other end into the SCART OUT socket at the rear of your VCR.
- 4 Plug in the power cable from your VCR to an AC power outlet.

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

# 2 Set Up

## A Inserting batteries



Note where the positive and negative ends go.

## B Finding the viewing channel

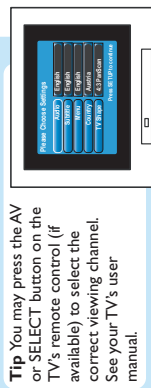


- 1 Press **STANDBY-ON** on the recorder.

- 2 Switch on the TV.

**Tip** If connected to your VCR, make sure the VCR is switched off or in standby mode before proceeding.

Press '0' on the TV's remote control, then press the Channel Down button repeatedly until you see the General Setup page. This is the correct viewing channel for the recorder.



**Tip** You may press the AV or SELECT button on the TV's remote control (if available) to select the correct viewing channel. See your TV's user manual.

## C Conduct installation

- 1 Select your Audio Language, Subtitle Language, Menu Language, Country and TV Shape.

**Tip** Use the recorder's remote control to make your choice.

- 2 Press **SETUP** to save and you are now prompted to connect the antenna.

- 3 Activate automatic Channel Search.

**Tip** If no channels were found, check the antenna connection and refer to user manual to search again once installation is done.

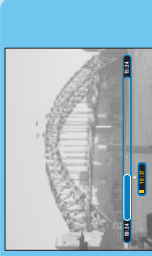
- 4 Check Date and Time.

- 5 Press **SETUP** to finish installation.

# 3 Enjoy

## Pause Live TV

Sometimes you might be interrupted while watching your favourite programme. Now you can **PAUSE** it, as if you were in control of the broadcast.



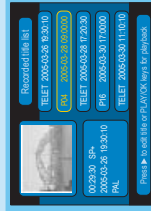
- 1 Press **PAUSE** while watching any live TV programme to suspend it.

- 2 Press **PLAY** to continue.

**Tip** When the recorder is switched on, the programme you are watching is temporarily recorded. In Pause Live TV the recorder replays the recorded footage, which will be erased when the recorder is switched to standby.

- 3 Press **TUNER** to go back to live broadcast.

## Playback from hard disk



- 1 Press **HDD** to see the titles on hard disk.
- 2 Press **UP** or **DOWN** to select a title.
- 3 Press **PLAY** on the title you want.

## Record



- 1 Press **REC** to record.
- 2 Key in the amount of time to record or press **REC** again for a 30 minutes recording. **Tip** Every time you press **REC** an additional 30 minutes is added to the recording time.
- 3 Press **STOP** to stop the recording.