

Service
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DVDR3360H/05/31/51/58



Service Instruction



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The 2006 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

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1. Technical Specifications and Connection Facilities

1.1 General:

Mains voltage	: 220V – 240V
Mains frequency	: 50 Hz
Power consumption (record)	: 27 W
Standby Power Consumption	: < 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	: 43 MHz – 860 MHz
Gain: (ANT IN - ANT OUT) w/o Amplifier	: -4dB ± 2dB
Gain: (ANT IN - ANT OUT) with Amplifier	: 2dB ± 3dB

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)	: ≤ 40dBμV at 75 Ω (high end) ≤ 60dBμV at 75 Ω (low end)

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

	: ≥ 40dB
--	----------

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

	: ≥ 65dB
--	----------

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	: 62.5 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 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	: 2Vrms ± 1dB
Channel unbalance (1kHz)	: < 0.22dB
Crosstalk 1kHz	: > 110dB
Crosstalk 16Hz-20kHz	: > 100dB
Frequency response 20Hz-20kHz	: ± 0.2dB
Signal to noise ratio (unweighted)	: < -95dB
Dynamic range 1kHz	: < -90dB
Distortion and noise 1kHz	: < 85dB
Distortion and noise 16Hz-20kHz	: < 85dB
Intermodulation distortion	: < -94dB
Mute	: < -100dB

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	: WxDxH:435x322x43mm
Weight without packaging	: 3kg
Weight with packaging	: 4kg

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 Playability

		DVDR3360H
Video Playback		
1.	Disc Media: CD-R/-RW, MP3- CD, VCD/SVCD, DVD-Video, DVD+R/+RW, DVD-R/-RW, DVD+RL DL	x
2.	Compression Format: MPEG1, MPEG2 DivX 3.11, DivX 4.x, DivX 5.x, DivX 6.0	x
Audio Playback		
1.	Disc Media: CD, CD-R/-RW, MP3-CD	x
2.	Compression Format: Dolby Digital, MP3, MPEG2 Multi- channel, AAC, WMA	x
3.	MP3 bit rates: 32- 256 kbps and VBR	x
Still Picture Playback		
1.	Disc Media: Picture CD	x
2.	Picture Compression Format: JPG	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.

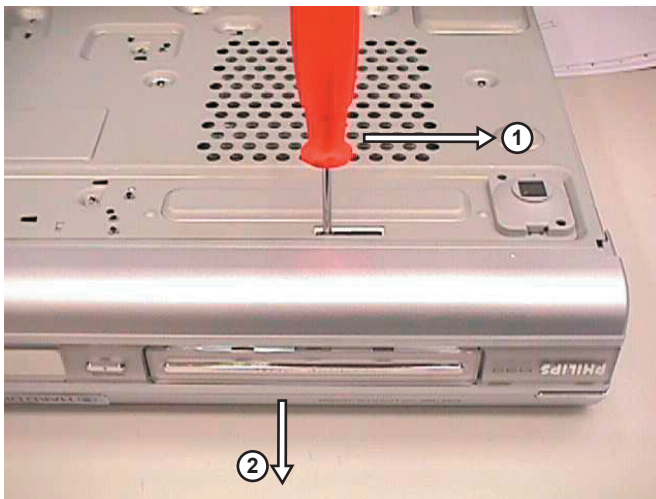


Figure 2-1

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. Power up the set and press <Open/Close> buttons down.
2. Close the tray and set will display:

FLASH 1

3. The OSD Display.

“Disc Upgrade - Software Upgrade Disc detected .Select OK to start upgrading or CANCEL to exit.”

Press OK and the set will display:

ERASE... >WRITE...>VERIFY

The OSD Display

“Software Upgrade.Please wait.Do not switch off the power.”

The loader software will also upgrade.OSD display

“Loader software Upgrade – Upgrading software.Please wait.Do not switch off the power.”

Note: When the screen display **“Verify”**, the progress bar stays at 80% for 5 minutes and do not switch off the power ,or the set will be defective.

The whole process takes less than 15 minutes

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

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

“Loader upgrade process have completed successfully.Press [OK] to reboot system.”

5. The tray open and the set will display:

DONE

6. Press [OK] and 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.and ensure no disc in the disc tray.
2. Press <Setup> button on the Remote control
3. Press <3><2><1> in the proper sequence
4. Press <Select > and the screen will display

Firmware Information

Build 5019V07 010 / Date:12 Apr 2006

Loader Version 43.03.10

Macrovision Version:

MPEG Chip ID:

Audio DAC:

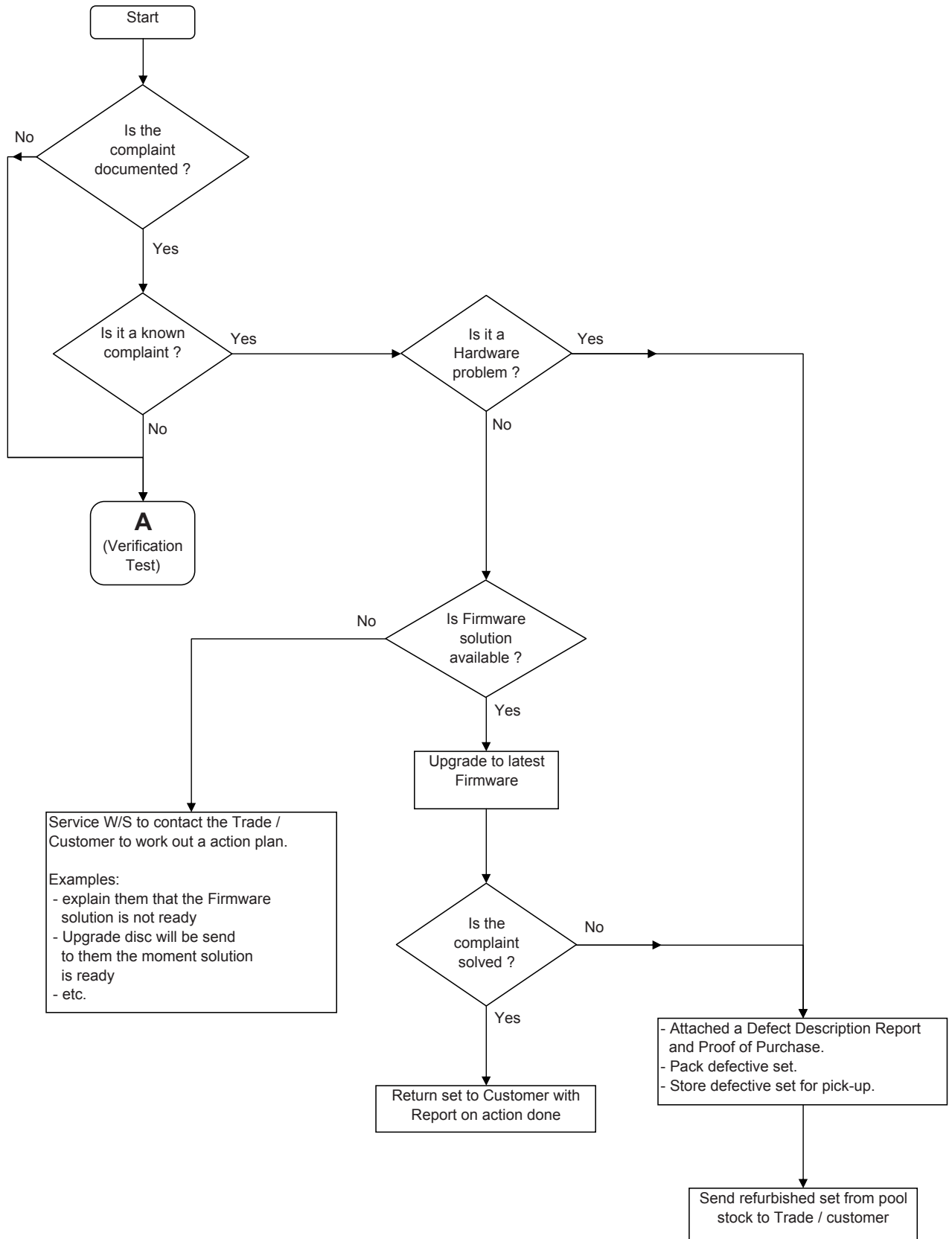
Region Num: 2

Developer: Philips PS3360H_31_R19.07

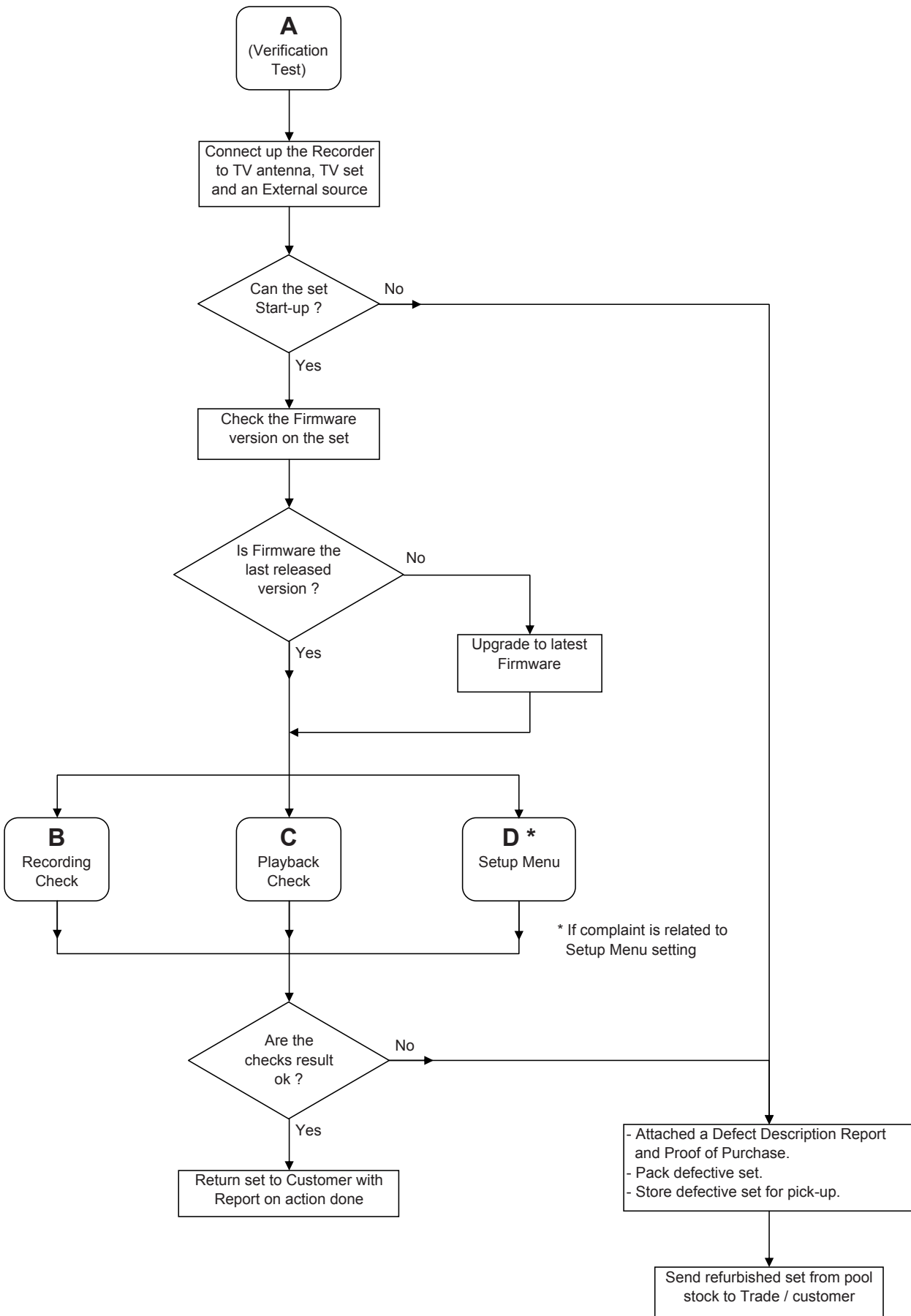
5. Press <OK> button and <Setup> to exit.

4. Service Flow Chart

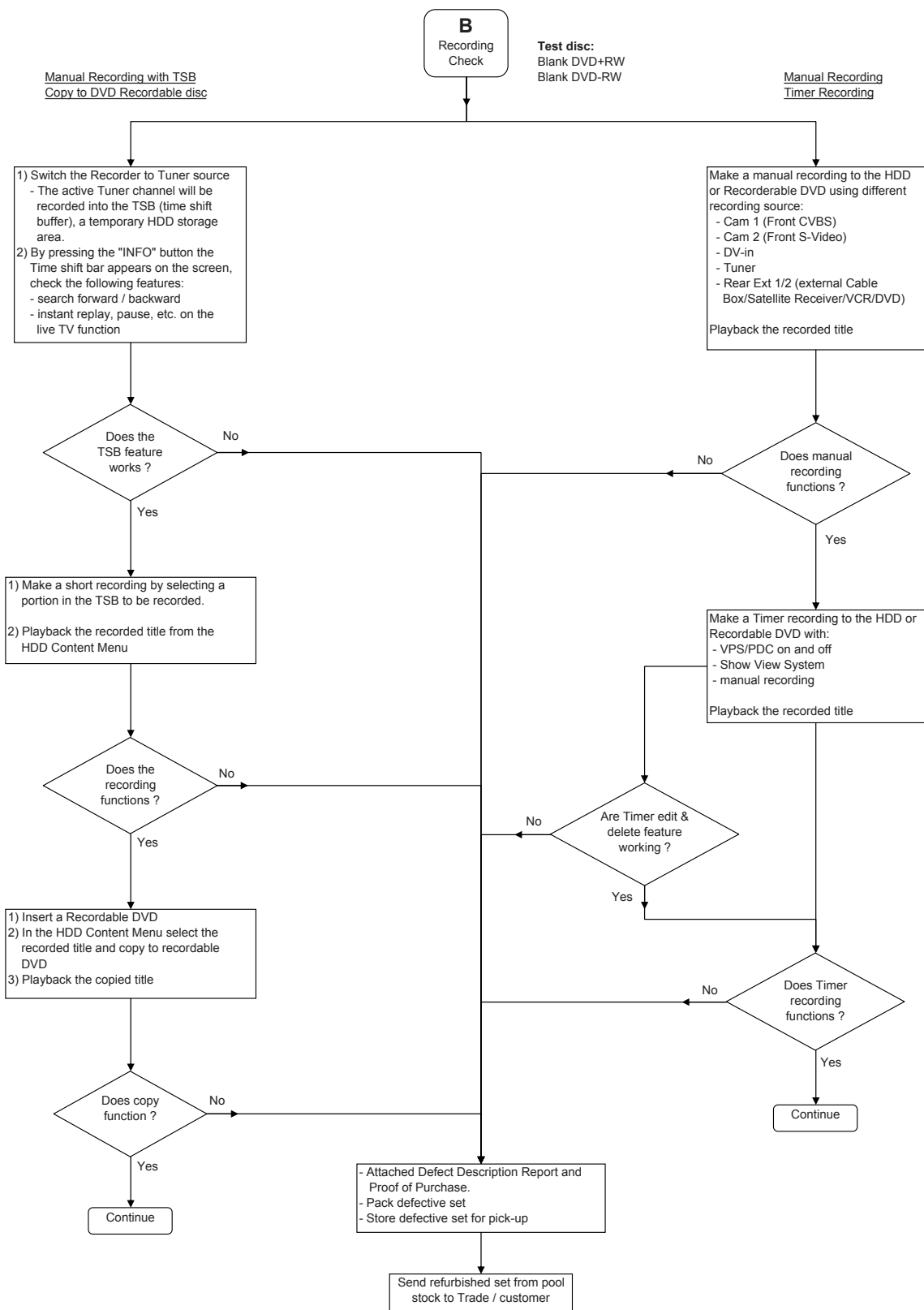
4.1 Start Process



4.2 Verification Process



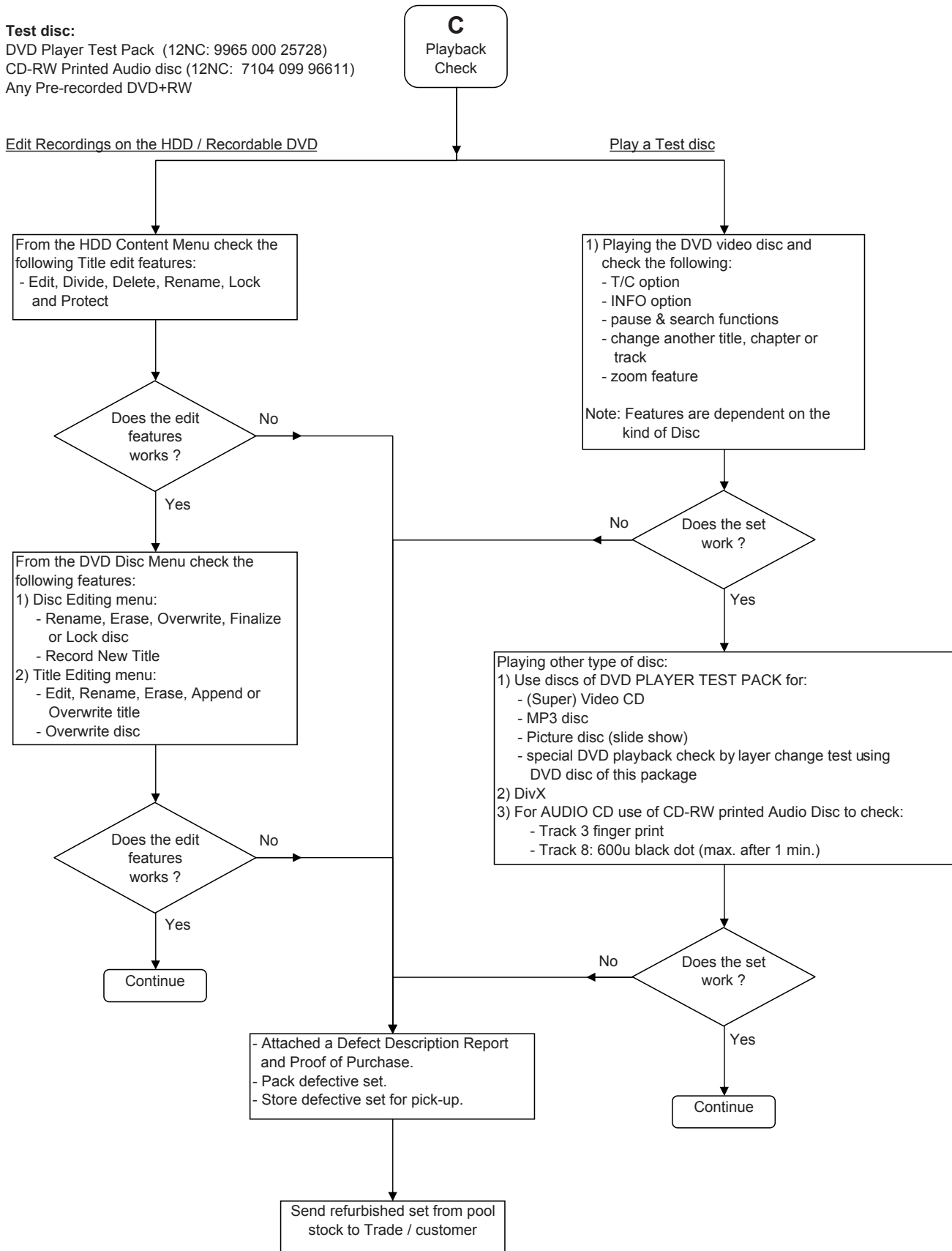
4.3 Recording Process



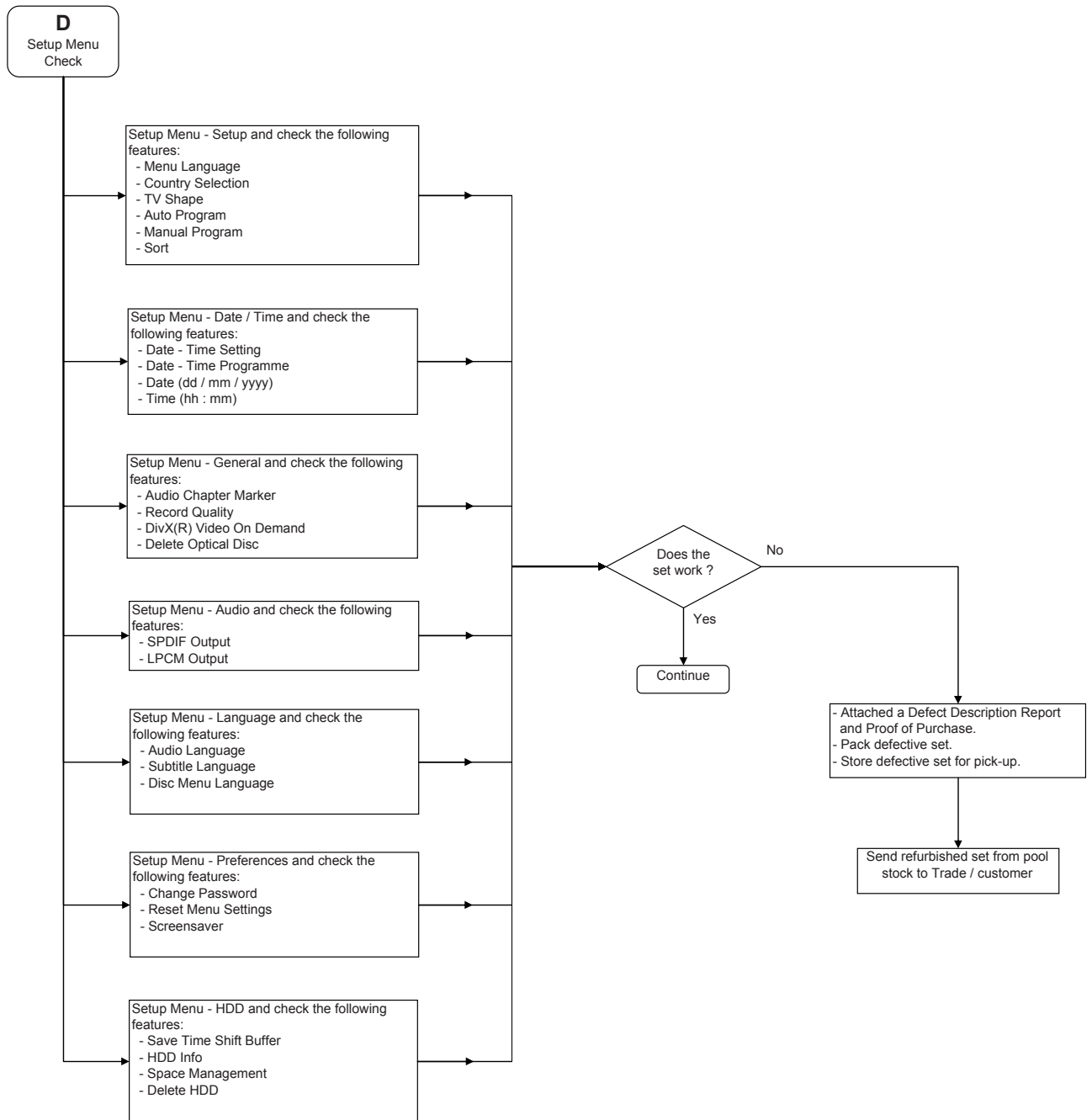
4.4 Playback Process

Test disc:

DVD Player Test Pack (12NC: 9965 000 25728)
 CD-RW Printed Audio disc (12NC: 7104 099 96611)
 Any Pre-recorded DVD+RW



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

DVDR 3360H

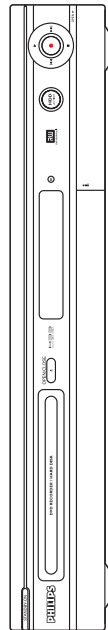
Hard Disk/ DVD Recorder

Quick Start Guide

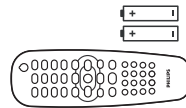


- 1** Connect
- 2** Set up
- 3** Enjoy

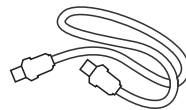
What's in the box?



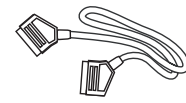
Hard Disk/ DVD Recorder



Remote Control and 2 batteries



RF Coaxial Cable



SCART Cable



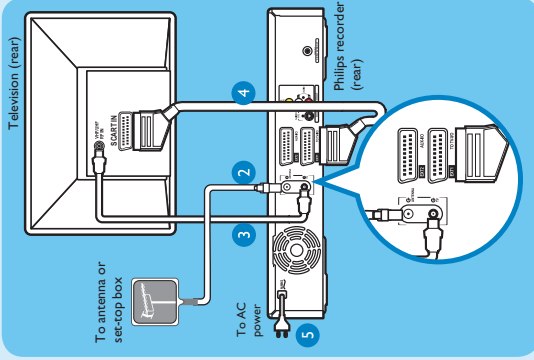
User Manual

PHILIPS

1 Connect

Start with the 'Basic Connection.' If you have a VCR, follow the instructions for 'Connection with a VCR or similar device'.

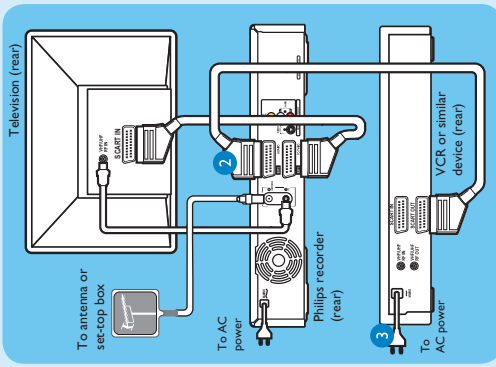
Basic Connection



- 1 Before connecting, unplug the antenna cable that is currently connected to your TV.
- 2 Connect the antenna cable to the **ANTENNA G** socket on the recorder.
- 3 Use the supplied RF coaxial cable to connect the **TV G** socket on this recorder to the Antenna In socket on the TV.
- 4 Use the SCART cable to connect the **EXT I/O** socket on this recorder to the corresponding SCART input socket on the TV.
- 5 Connect the power cable from the recorder to an AC power outlet.

Connection with a VCR or similar device

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



- 1 Follow the steps under 'Basic Connections' before you proceed to step 2 below.
- 2 Use another SCART cable (not supplied) to connect the **EXT I/O** SCART socket on this recorder to the SCART OUT socket on the VCR.
- 3 Connect the power cable from your VCR to an AC power outlet.

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

For additional connection diagrams, see the accompanying User Manual.

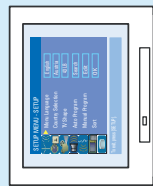
2 Set up

A Finding the viewing channel



- 1 Press **STANDBY-ON** on the recorder.
- 2 Note If connected to your VCR, make sure it is switched off or in standby mode before proceeding.
- 3 Press **SETUP**.

4 If your TV does not switch to the correct viewing channel, press '0' on the TV's remote control, then press the Channel Down button repeatedly until you see the { **SETUP MENU - SETUP** } page. This is the correct viewing channel for the recorder.



Note 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.

B Initial Installation

- 1 Press **SETUP** on the remote control.



Note Use **up** and **down** keys to toggle through the options. Select an item by pressing **right**. To confirm a setting, press **OK**.

- 2 Select the **OSD language**.
 - Highlight **Menu Language** and press **right**.
 - Select { **Menu Language** } and press **right** to access the options.
 - Select the desired language option and press **OK** to confirm your selection.
- 3 Select the **country of your residence**.
 - Press **down** key to select { **Country Selection** } and press **right** to access the options.
 - Select the country of your residence and press **OK** to confirm your selection.
- 4 **Setup and install TV channels**.
 - Use **up** / **down** to select { **Auto Program** } and press **OK**.
 - A warning message will appear. Select **CONTINUE** and press **OK** to start automatic TV channel search.

Note If no channels were found, check the antenna connection and start the channel search again.

- 5 **Set the date and time**.
 - Highlight **Date-Time** and press **right**.
 - Select { **Date-Time Programme** } and press **right** to access the options.
 - Select the desired broadcast channel to automatically set the date/time and press **OK** to confirm.
- 6 Press **SETUP** to finish installation.

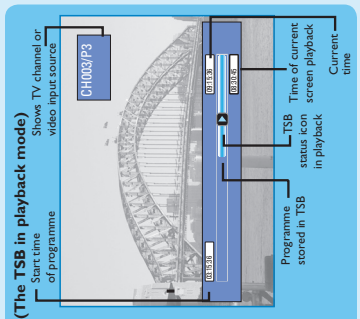
Your Philips recorder is now ready for use!

3 Enjoy

About the Time Shift Buffer (TSB)

Once you switch on this recorder, the currently selected TV programme will be stored in a temporary storage called the 'TSB' (Time Shift Buffer). The TSB can store up to 6 hours of recordings temporarily.

Press **INFO** once to display the Time Shift video bar.



The contents on the time shift buffer will be erased once you press **CH** or if you switch to another mode: **SOURCE**, **DV**, **DVD REC**.

Pause 'live' TV

At times, you may 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.
 - 3 To return to live broadcast, press and hold **right** once.
- To jump forward playback, press **right** once for every 30 seconds.

Instant Replay

While watching a live TV programme, you can press **left** to jump back 10 seconds upon every single press for instant replay.

To return to live broadcast, press and hold **right**.

Start Recording

A Before recording to hard disk
You can preset the recording quality for content recorded to the time shift buffer.

- 1 Press **SETUP** on the remote control.
- 2 Highlight **Record Quality** and press **right**. Press **down** repeatedly until you highlight { **Record Quality** } and press **right**.
- 3 Use **up** / **down** to select the preferred mode of recording quality and press **OK** to confirm.

Record Quality	Hours of recording that can be stored 160GB Hard Disk
HQ High Quality	34
SP Standard Play	68
SP+ Standard Play Plus	65
EP Extended Play	134
SEP Super Extended Play	200
SEP+ Super Extended Play Plus	270

Hours of recording may vary. The actual recording time will be determined for the operations of this recorder and time shifting.

B Record to hard disk

- 1 Press **TUNER** to switch to tuner mode.
- 2 Press **CH** or to go to the TV programme channel you wish to record.
- 3 Press **INFO** to display the time shift video bar.



Note To record from a connected external device, press **SOURCE** repeatedly to cycle through video input sources from: { **CAM 1** }; VIDEO socket on the front { **CAM 2** }; S-VIDEO socket on the back { **EXT 1** }; EXT 1 start socket on the back OR Press **DV** to record from a DV camcorder connected via the DV IN socket on the recorder.

- 4 Press **REC** to start recording.
 - Note** Press **REC** repeatedly to extend 30 minutes increments per single press.
- 5 To stop recording, press **STOP**.

3 Enjoy

C Record to a recordable DVD

- 1 Press **TUNER** to switch to tuner mode.
- 2 Press **CH** (+) or (-) to go to the TV programme channel you wish to record.
- 3 Press **DVD REC** to switch to direct record mode and display the information bar.

System Status: Stop
Record to Optical Disc As Standard Play Plus
Elapsed time: 00:01:08 Remaining time: 05:00:00

Note To record from a connected external device, press **SOURCE** repeatedly OR press **DV** to record from a DV camcorder connected via the DV IN socket on the recorder.

- 4 Press **SELECT** repeatedly to select the preferred mode of recording quality.

Record Quality	Hours of Recording (Max. 47 GB recordable DVD-R or RW disc)	Types of discs for recording
High Quality HQ	2	DVD-RW
Standard Play SP	2.5	DVD-R
Long Play LP	3	DVD-RW
Extended Play EP	4	DVD-R
Super Extended Play SEP	8	DVD-R

- 5 Press **REC** to start recording.
- 6 To stop the recording, press **STOP**.

A Playback from hard disk

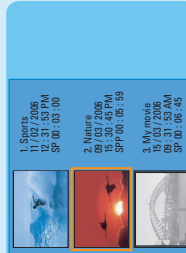


- 1 Press **HDD** to view the titles on the hard disk.
- 2 Use **up** / **down** to select the title.
- 3 Highlight the title you want and press **PLAY** to start playback.

Note To access the edit menu, highlight the title and press **right**.
Press **HDD** to go back to the disc menu anytime.

B Playback from a disc

- 1 Insert a CD or DVD disc.
If the disc menu does not show, press **DVD** to view the list of titles on the disc.



- 2 Use **up** / **down** to scroll through the list of options and/or titles.
- 3 Highlight the title you want and press **PLAY** to start playback.
- 4 To stop, press **STOP**.
- 5 Press **DVD** to go back to the disc menu anytime.

For more recording and playback options, see the accompanying **User Manual**.

3 Enjoy

Copying to a recordable DVD disc

You can copy the contents in your hard disk to a recordable DVD disc.

- 1 Insert a recordable DVD disc.
- 2 Press **HDD** to view the titles on the hard disk.
- 3 Use **up** / **down** to select the title.
- 4 Press **SELECT** to mark the titles you wish to copy.
- 5 Once you finish your selection, press **HDD** to start copying to the recordable DVD disc.

Note When copying is in progress, the icon will be shown on the screen.

- 6 During copying, you can continue watching TV programmes in tuner mode or select another HDD title for playback.
- 7 Once the copying process completes, the icon will no longer be shown.

Types of discs used on this recorder

Type	Record	Playback	Edit
DVD-RW	✓	✓	✓
DVD-R	✓	✓	✓
DVD-RW	✓	✓	✓
DVD-R	✓	✓	✓
DVD VIDEO	✗	✓	✗
AUDIO CD	✗	✓	✗
VIDEO CD	✗	✓	✗
DATA CD	✗	✓	✗
DATA CD	✗	✓	✗

Need help?

Onscreen Helptext

Press **INFO** on the remote control for onscreen helptext when using your Philips recorder.

User Manual

See the user manual that came with your Philips recorder.

Online

Go to www.philips.com/support.

