

Operating Manual

DVD

- Centros 1102
- Centros 1172



LOEWE.

233-32122.022



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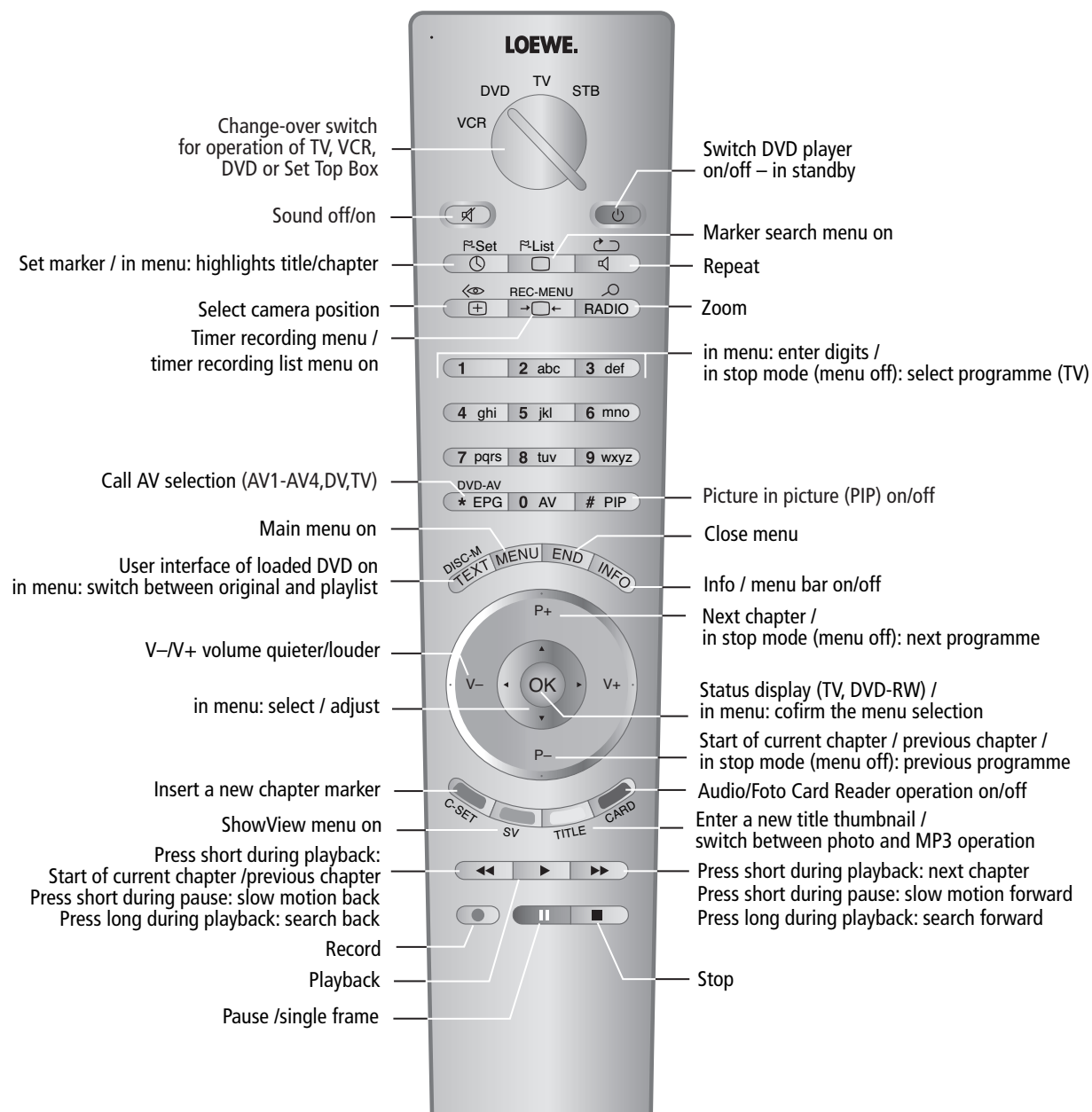
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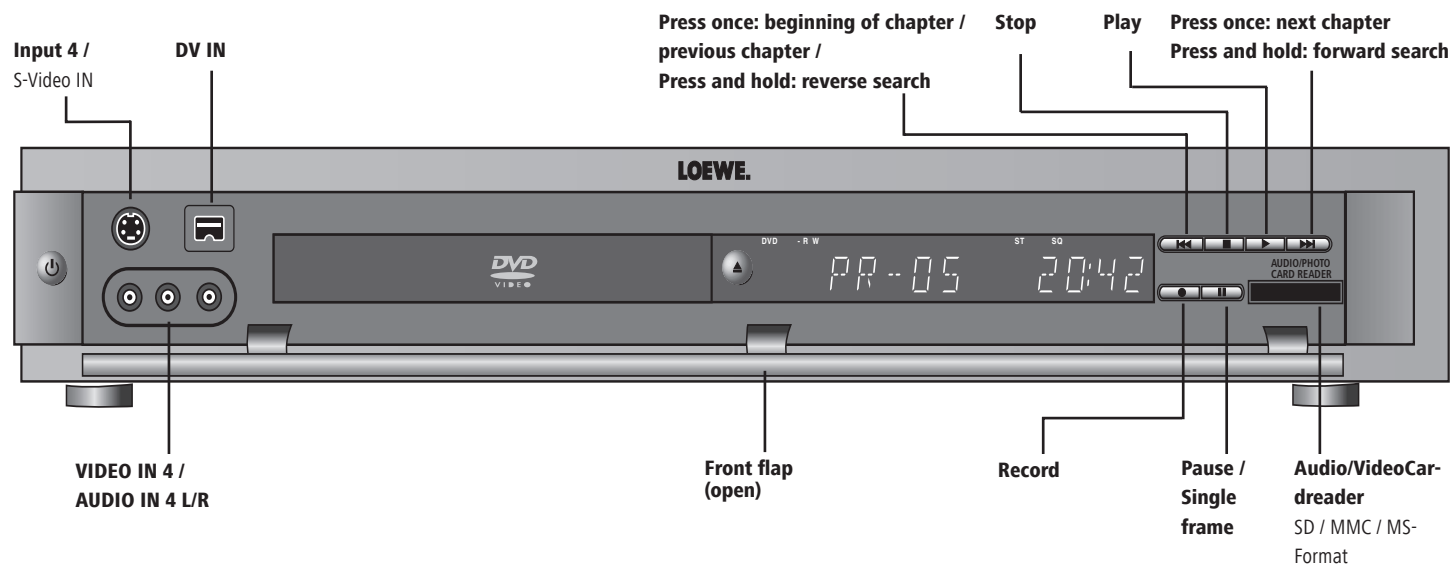
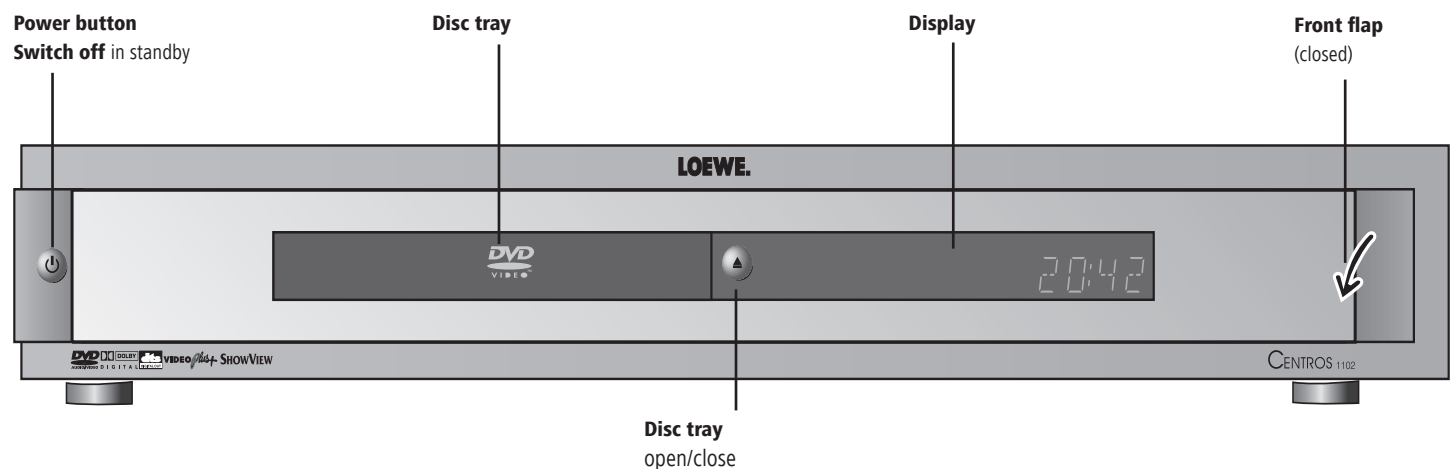
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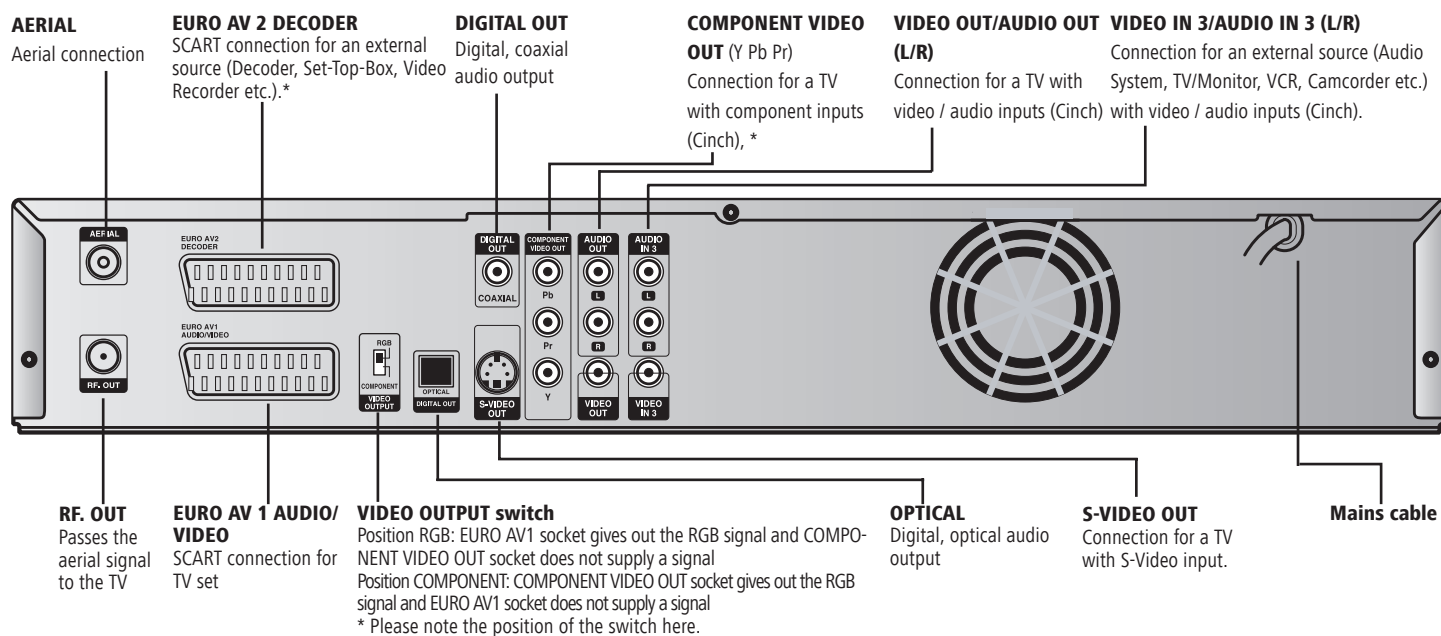
Remote control RC3 – DVD operation



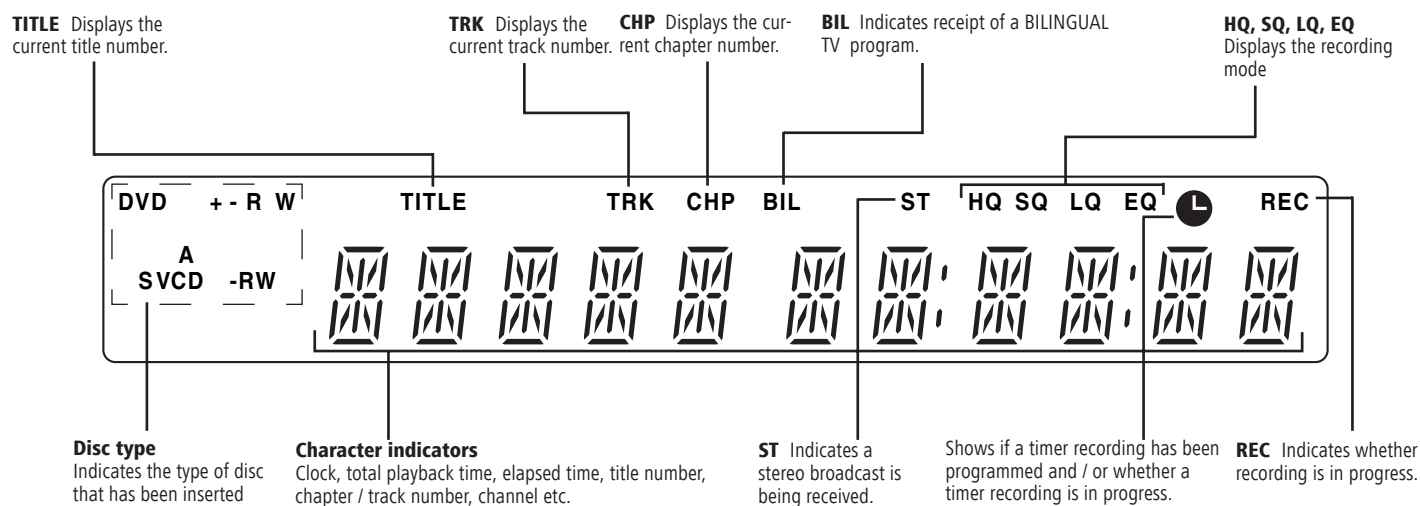
Centros Front Panel



Centros Rear Panel & Display



Caution: Do not touch the inner pins of connection sockets on the rear panel. Electrostatic discharge may cause permanent damage to the unit.



Welcome

Thank you

for choosing a Loewe product. We are happy to welcome you as our customer.

At Loewe we combine the highest standards of technology, design and user friendliness. This is equally true of TV, DVD, video, audio and accessories.

Neither technology nor design is an end in itself, but both are intended to provide our customers with the best possible audio and visual experience.

Our design is not influenced by short-term, fashionable trends. You have, after all, purchased a high-quality piece of equipment which you do not want to get tired of looking at tomorrow or the day after.

Scope of delivery

- Loewe Centros DVD recorder
- RC3 remote control with 2 batteries
- Euro AV cable (Scart cable)
- Audio cinch cable
- Video cinch cable
- Antenna cable
- 1x DVD-RW disc
- this operating manual

You can use the remote control to operate four units: as well as this DVD recorder, a Loewe television, a Loewe video recorder and a set-top box (STB).

Set up

- Place the DVD recorder on a firm, level base.
- Do not place the DVD recorder in the vicinity of sources of intense heat or in direct sunlight.
- When installing in a cabinet or enclosed shelf: Leave about 2.5cm free space around the DVD player for unhindered air circulation to prevent build-up of heat.

- There can be interference to the images and sound of any nearby television, video recorder or radio. If this occurs, do not place the unit near to a television, video recorder or radio, or switch the unit off after removing the disc.
- Install the DVD recorder where there is nothing to obstruct the remote control's infrared signal from reaching the DVD recorder display.
- Do not place strong artificial light sources in front of the device. This may affect infrared reception.
- If there is an electrical storm, disconnect the antenna and mains plug. Power surges caused by lightning strikes can damage the unit through the antenna system or the mains.
- The antenna and mains should also be disconnected if the unit is to remain unsupervised for a long period of time.
- The mains plug must be easily accessible so that the unit can be disconnected at any time.
- Lay the cable in such a way that it cannot get damaged. The power cable should not be kinked or laid over sharp edges, not stood upon or exposed to chemicals - the latter also applies to the device as a whole. A mains cable with damaged insulation can cause electric shocks and is a fire hazard.
- When removing the power plug, pull the body of the plug, and not the cable. Otherwise, the wires in the plug could get damaged and cause a short circuit the next time it is plugged in.

You should also read and follow the safety advice on the following pages.

Disposal

Cardboard box and packaging

You have opted for a durable and technically sophisticated product. In line with national regulations regarding the disposal of packaging materials, we pay a fee to authorised recyclers who collect packaging from dealers. However, we recommend that you keep the original cardboard box and the rest of the packaging materials so that the unit can, if necessary, be transported in the safest possible conditions.

The unit



Important: The EU Directive 2002/96/EG governs the proper re-acceptance, handling and recycling of used electronic appliances.

Old electronic appliances must therefore be disposed of separately. Never throw this set in the normal domestic waste. You can hand in your old set free of charge at identified collection points or at your dealer if you buy a similar new set. Other details about re-acceptance (also for non-EU countries) are available from your local administration.

Remote control batteries

The batteries provided contain no harmful materials such as cadmium, lead or mercury.

Regulations concerning used batteries mean that batteries may no longer be thrown out with the household rubbish. You can dispose of used batteries free of charge at the collection points in commercial outlets. Your dealer will also have a collection point for used batteries.

Welcome

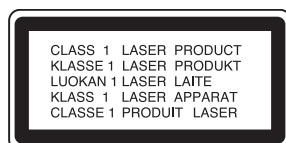
Cleaning

- Only clean your DVD recorder with a damp, soft, clean cloth (with no aggressive cleaning agents).
- If DVD recorder fails to read the disc correctly, the reader unit in the device may be soiled. Use a commercially-available cleaning disc.
- Always keep the disc drawer closed to prevent dust getting into the drawer and onto the lens.

For your safety

For your own safety and to avoid unnecessary damage to your unit, please read and follow the safety advice below:

- This DVD recorder is only to be used for receiving, displaying and playing visual and sound signals.
- Switch off your DVD system (Centros, TV and any other audio components which may be connected) before connecting or disconnecting other devices or speakers.



- Do not open up the housing, or you could be directly exposed to the laser beam. The laser beam will be visible if the unit is open. DO NOT LOOK INTO THE LASER BEAM.

Protect your DVD recorder from ...

- liquids and damp
- shock and mechanical stress
- magnetic and electrical fields
- cold, heat, direct sunlight and extreme fluctuations in temperature
- dust
- anything which obstructs ventilation
- manual interference with the unit's interior

Your Centros has only been designed for use in a domestic environment. The warranty covers this normal use of the DVD recorder.

PLEASE NOTE: TO AVOID RISK OF ELECTRICAL SHOCK, DO NOT REMOVE THE COVER (OR THE REAR OF THE UNIT). THERE ARE NO PARTS INSIDE THE UNIT THAT CAN BE REPAIRED BY THE USER. REPAIRS SHOULD ONLY BE CARRIED OUT BY A LOEWE DEALER.

If you have moved the DVD recorder from a cold to a warm environment, leave it to stand for about an hour because of the risk of condensation building up. Do not switch it on until it has reached room temperature. This will avoid seriously damaging the components.

Read this operating manual, and experiment with your new equipment's features so that you are familiar with it.

Advantages of connection to a Loewe TV set

You can use **Digital Link** to install the DVD recorder e.g. in an enclosed rack or a wall unit, without there being direct visible contact with the DVD recorder. Using the DVD remote control, you can operate the DVD recorder via the Loewe television. To do this, Digital Link must be switched on at the DVD recorder (see page 17).

If you want to make timer recordings from the satellite tuner in the television, the recording is controlled by Digital Link.

Digital Link Plus enables channel data to be transferred from the television's satellite and cable channels to the DVD recorder, so that the same channels appear in the same channel position. This means that timer recordings of satellite and cable channels can easily be programmed from the television using the EPG (Electronic Program Guide). The timer data is copied to the DVD recorder, which then, independently of the television, carries out the timer recording. With timer data for satellite stations, the television starts and stops the DVD recorder and sets it to the Euro AV 1 input. If playback begins, this is immediately shown on the television, no matter which TV channel you are currently watching (if the television is switched off, it will automatically switched on).

Essential Information

Writable Discs



DVD-RW (Digital Video Disk - ReWritable)

These discs can be written to several times. Recordings can be deleted and the disc can then be rewritten.



DVD-R (Digital Video Disk - Recordable)

These discs can be written to only once. Following finalisation a DVD-R disc can no longer be written to or edited.



DVD+RW (Digital Video Disk + ReWritable)

These discs can be written to several times. Recordings can be deleted and the disc can then be rewritten.



DVD+R (Digital Video Disk + Recordable)

These discs can be written to only once. Following finalisation a DVD+R disc can no longer be written to or edited.

Notes:

- This recorder cannot write to CD-R or CD-RW discs.
- DVD-R/RW, DVD+R/RW and CD-R/RW discs written to using a PC or a DVD or CD recorder cannot be played if the disc is damaged or dirty or if there is condensation on the recorder's lens.
- If you record a disc using a PC, even if it is in a compatible format, the disc may not play depending on the settings of the application software used to create the disc. (Further information can be obtained from the software provider.)

Playable Discs



Video-DVD



Video-CD (VCD)
(8 cm / 12 cm disc)



Audio-CD
(8 cm / 12 cm disc)

In addition this unit can play DVD-R/DVD-RW discs, DVD+R/DVD+RW discs, CD-R/CD-RW discs containing audio titles, MP3* or JPEG files, SVCD and Kodak picture CDs.

* including MP3 discs with ID3-Tag

Notes:

- Depending on the recording unit or the CD-R/RW (or DVD±R/±RW) disc itself, some CD-R/RW (or DVD±R/±RW) discs cannot be played with this unit.
- Do not attach any labels to either side (the labeled side or the written side) of a disc.
- Do not use any irregularly shaped CDs (e.g. heart-shaped or octagonal). If you use these discs malfunctions may occur.

Regional code of the DVD recorder and DVDs



This DVD recorder can only play Region "2" or "all" coded DVDs. The region code on the label of some DVDs shows which type of DVD recorder can play those discs. If you play other discs the error message "Incorrect region code. Playback not possible." will be displayed on the TV screen.

Some discs may not have the label with the region code even though they cannot be played in all regions.

Notes on DVDs and Video CDs: Some DVDs and Video CD playback functions can be programmed in a particular way by some software manufacturers. As this unit plays DVDs and Video CDs as they have been designed by the software manufacturer, some playback functions may not be available whilst other additional functions may be available. Further information can be found in the instructions supplied with the DVDs and Video CDs. The unit may not be able to play some DVDs made for specific business purposes.

Essential Information

Disc-related Terms

Title (DVD only)

A title is the main film content or the content of the accompanying feature or the music album. Each title has a title number enabling you to locate it easily.

Chapter (DVD only)

Chapters are sections of a film or a piece of music that are smaller than a title. A title consists of one or several chapters. Each chapter has a chapter number to enable you to locate the desired chapter. Depending on the disc, chapters may not be labeled.

Track (Video CD or Audio CD only)

Sections of a film or a piece of music on a Video CD or an Audio CD. Each track has a track number to enable you to find the desired track.

Scene

On a Video CD with PBC (Playback Control) functions, moving pictures and still pictures are divided into sections that are called "scenes". Each scene is displayed in the scene menu and has a scene number to enable you to find the scene quickly. A scene consists of one or more tracks.

Types of Video CDs

There are two types of Video CDs:

Video CDs equipped with PBC (Version 2.0)

PBC (Playback Control) functions enable you to interact with the system via menus, search functions or other typical computer operations. In addition high-resolution still pictures can be displayed if they are available on the disc.

Video CDs not equipped with PBC (Version 1.1)

These discs are operated in the same way as Audio CDs and allow playback of video pictures and sound. They are not however equipped with PBC.

Symbols

The ☹ symbol on the screen

During operation "☹" may appear on the screen. This symbol means that the desired function is not currently available on this disc.

Disc symbols in the operating instructions

If part of the operating instructions contains one of the symbols listed below, the section is only applicable to the disc shown on the symbol.

Many functions of this recorder are dependent on the selected recording quality. One or more of the symbols (*DVD*, *Video*, *+RW*, *MP3*) are displayed for each function described in the manual so that you can immediately see whether the disc supports this function.

<i>Video</i>	DVD-R/RW disc with VR recording mode
<i>VR</i>	DVD-RW disc with VR recording mode
<i>+R</i>	DVD+R disc
<i>+RW</i>	DVD+RW disc
<i>DVD</i>	DVD-Video disc
<i>VCD</i>	Video CD
<i>CD</i>	Audio CD
<i>MP3</i>	MP3 CD
<i>JPEG</i>	JPEG CD

The finalized DVD disc is a DVD-Video disc.

DVD-R and DVD-RW discs

How are DVD-R and DVD-RW discs different?

The essential difference between a DVD-R and a DVD-RW disc is the fact that a DVD-R disc can only be written to once, whilst a DVD-RW disc can be written to several times. In addition, its content can be deleted. You can write to and delete a DVD-RW disc approx. 1000 times.

Playback of writable discs on normal DVD players

DVD-R discs and DVD-RW discs written to in Video mode can be played on some normal DVD players. They must however be finalized first. This process fixes the content of the disc so that it can be read by other DVD players as a DVD-Video disc.

Essential Information

What are “Recording Modes”?

This recorder offers two recording modes: VR mode and Video mode. Recordings on DVD-R discs are always in Video mode. Recordings on DVD-RW discs can be in either VR or Video mode.

DVD-R and DVD-RW Discs

VR Mode Recording

- 4 possible picture quality/recording time settings (EQ, LQ, SQ, HQ), see page 24.
- Cannot be played on normal DVD players.
- Recordings can be comprehensively edited.
- Use of original lists and playlists (see page 48 and 49).

Video Mode Recording

- 4 possible picture quality/recording time settings (EQ, LQ, SQ, HQ), see page 24.
- Can be played on normal DVD players (after finalization)
- Limited editing functions.

Note: The “Video mode” DVD-Video format is a new format for recording on DVD-R/RW discs that was approved by the DVD Forum in 2000. For this reason you may experience problems playing writable DVD discs on some players. Symptoms include video artifacts, audio and/or video dropout and playback stopping suddenly. Our company cannot take any responsibility for problems playing discs recorded on this recorder on other players.

Use of “Original” and “Playlist”

Throughout this manual you will often see the words “Original” and “Playlist” used to describe the actual content and the edited version.

- **Original:** Content refers to what is actually recorded on the disc.
- **Playlist:** Content refers to the edited version of the disc, i.e. how the original content should be played.

DVD+R and DVD+RW Discs

Recording on DVD+RW Discs

- 4 possible picture quality/recording time settings (EQ, LQ, SQ, HQ), see page 24.
- Can be played on many DVD players that support the +RW format (where appropriate, only after finalization).
- Titles/chapters of recordings can be edited.
- Edited content can only be played after finalization on some DVD players.

Recording on DVD+R Discs

- 4 possible picture quality/recording time settings (EQ, LQ, SQ, HQ), see page 24.
- Can be played on many DVD players that support the +R format (where appropriate, only after finalization).
- Limited editing of titles/chapters.
- Edited content cannot be played on normal DVD players. (Hide, combined chapters, added chapter markers etc.).

DVD Recordings

Note: Fingerprints and scratches on the disc can affect playback and/or recording. Take proper care of your discs.

Disc Types and Recording Formats, Modes and Settings

This recorder can play five different types of DVD disc:

- DVD-Video disc
- DVD-RW disc
- DVD-R- disc
- DVD+RW disc
- DVD+R- disc.

A DVD-R disc is always formatted in “Video Format” - the same as prerecorded DVD-Video discs, i.e. after finalization you can play a DVD-R disc on a normal DVD player.

“Video Recording Format” (VR) is the default format for a DVD-RW disc. If required, the disc can be changed to Video format through subsequent reformatting (“Disc → Formatting” in the main menu) (Caution! The contents of the disc will be erased).

The recording quality is closely related to the formatting.

Essential Information

If the disc format is Video Recording format, the recording mode for the disc is referred to as „VR mode“. However, the recording mode of a Video format disc is referred to as „Video mode“ (Exception: a prerecorded DVD-Video disc which is not recordable has no recording mode).

The recording modes determine the recording and editing options for the whole disc. Amongst other things they determine the picture quality and how much space the recording will take up on the disc.

Notes on Recording

- The displayed recording time is not exact as the recorder uses variable bit-rate video compression. This means that the exact recording time will depend on the material that is being recorded.
- When recording a television broadcast the recording time may be shorter if the reception is poor or the picture contains interference.
- If you record only still pictures or audio, the recording time may be shorter.
- The displayed recording time and remaining time may not always add up to the total length of the disc.
- The available recording time may be shorter following intensive editing of the disc.
- If you use a DVD-RW disc, make sure you select the recording format (Video mode or VR mode) before you start recording. See page 25 (Formatting) for more information.
- If you use a DVD-R disc you can continue recording until the disc is full or until you finalize it. Before you start recording check how much recording time is available on the disc.
- If you use a DVD-RW disc in Video mode, the available recording time will increase if you delete the last title recorded on the disc.
- The „Delete Title“ function in the „Title List-Original“ menu only hides the title, it does not however delete it from the disc and does not therefore increase the recording time (except if you delete the last recorded title on a DVD-RW disc in Video mode).
- Overwrite recording is only possible on DVD+RW discs.

Disc type	Formatting	Recording mode	Functions
DVD-Video	Not possible	Not applicable	Playback only
DVD-RW	Video Recording format (Default)	VR mode	Playback, recording, original/playlist editing
	Video format	Video mode	Playback, limited recording, limited editing
DVD-R	Video format	Video mode	Playback, limited recording, limited editing
DVD+RW	+RW Video format	Video mode	Playback, limited recording, editing of titles/chapters
DVD+R	+R Video format	Video mode	Playback, limited recording, limited editing of titles/chapters

Initial Installation

Recording TV-Audio Channels

This recorder can also record NICAM audio. If the NICAM setting (page 20) is set to "Auto", NICAM audio will be recorded in the case of a NICAM transmission.

Restrictions on Video Recording

- You cannot record any copy-protected film material with this recorder. Copy-protected video includes DVD-Video discs and some satellite transmissions. If copy-protected material is encountered during recording, recording is paused or stopped automatically and an error message appears on the screen.
- Video that can only be copied once can only be recorded using a DVD-RW disc in VR mode with CPRM (see below).
- NTSC format signals from analog or DV inputs cannot be recorded correctly with this recorder.
- SECAM format video signals (from an integrated TV tuner or from analog inputs) are recorded in PAL format.

CPRM

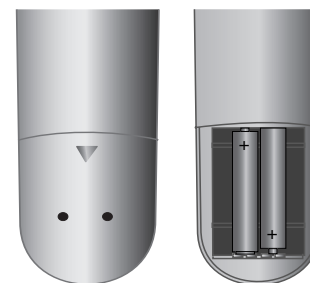
CPRM is a copy protection system (with scramble system) that only allows the recording of "copy once" broadcasts. CPRM is the abbreviation for "Content Protection for Recordable Media".

This recorder is CPRM compatible. You can therefore record copy-once broadcasts but cannot make copies of these recordings. CPRM recordings are only possible with VR mode formatted DVD-RW discs and can only be played on players with CPRM compatibility.

Copyright

- The recording equipment should only be used for lawful copying. You should find out what constitutes lawful copying in the country in which you are making a copy. Copying of copyrighted material e.g. films or music is only lawful if permitted by a legal exception or consented to by the rights owner.
- The product contains copyright protection technology that offers protection through certain US patents and other intellectual property rights and is the property of the Macrovision Corporation and other companies. Use of this copyright protection technology must be authorized by the Macrovision Corporation. It is only intended for private or other limited use unless otherwise authorized by the Macrovision Corporation. Reverse engineering and disassembly are prohibited.

Initial Remote Control Setup



To insert or change the batteries, press on the imprinted arrow. Slide off and remove the battery compartment cover. Insert alkaline-manganese LR 03 (AAA) type batteries and make sure the + and – poles are aligned correctly. Then, replace the cover.

Resetting the DVD Recorder

If any of the following problems occur...

- The unit is plugged in but will not turn on or off.
- The display panel does not work.
- The DVD recorder is not functioning normally.

..., the DVD recorder can be reset in the following way:

- Hold the  button down for at least 5 seconds. The unit will switch off. Press the  button again to switch the unit back on.
- or unplug the power cable, wait at least 20 seconds and plug the cable back in.

Initial Installation

Shipping the Unit

The original shipping box and packaging materials should be used to ship the unit. To give the unit the best possible protection, repack it as it was originally packed by the manufacturer.

Notes on Discs

Handling Discs

Do not touch the prerecorded side of the disc. Hold the disc at the edges so as not to touch the surface with your fingers. Do not stick paper or tape to either side of the disc.

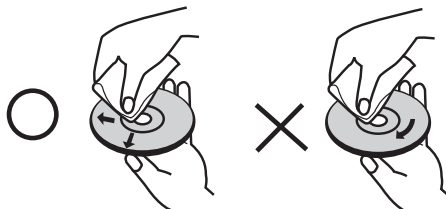


Storing Discs

After playing, store the disc in its case. Do not expose the disc to direct sunlight or a source of heat and never leave it in a parked car exposed to direct sunlight as there may be a considerable increase in temperature inside the car.

Cleaning Discs

Fingerprints and dust on the disc can affect the picture and sound quality. Clean the disc before playing it with a clean cloth. Wipe the disc from the center outwards.



Do not use any strong solvents such as alcohol, benzene, thinner, commercially available cleaners or anti-static sprays intended for vinyl records.

Connections - General

Notes:

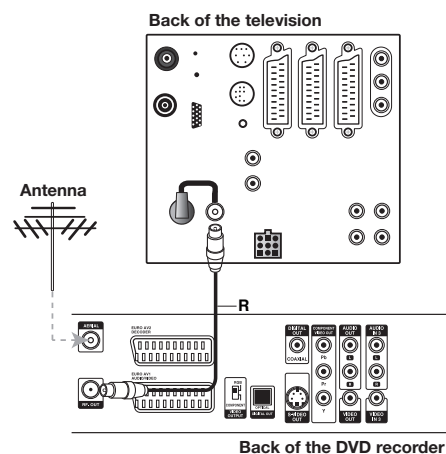
- Depending on your television set and the other units you want to connect, there are several ways of connecting your recorder to your TV set. Only use the connection methods described below.
- Refer as necessary to the manuals for your television, DVD recorder, stereo system and other units in order to make the best possible connections.

Caution:

- The DVD recorder must be connected directly to the television. Tune the television to the correct video input channel.
- Do not connect the DVD recorder AUDIO OUT socket to the audio system Phono In socket.

Connecting to the Aerial

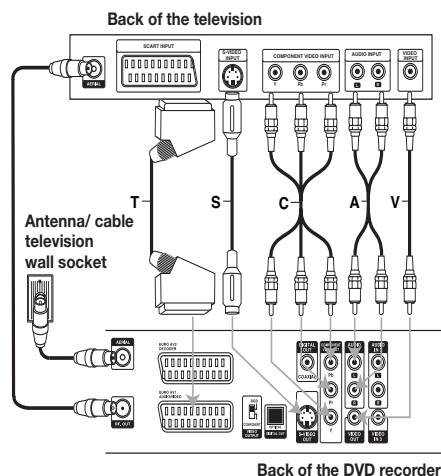
Remove the existing aerial cable plug (for terrestrial or cable televisions) from the television and plug it into the aerial socket on the back of the DVD recorder ("AERIAL" socket). Plug one end of the supplied aerial cable into the TV socket on the DVD recorder ("RF. OUT") and the other end into the aerial socket on the television.



Initial Installation

Connecting to the Television

Make one of the following connections depending on the functionality of your existing equipment.



SCART Connection (e.g. Loewe TV)

Connect the EURO AV1 AUDIO/VIDEO Scart socket on the DVD recorder to the corresponding input socket on the television using Scart cable (T).

Video Connection

Connect the VIDEO OUT socket on the DVD player to the Video input socket on the television using Video cable (V).

S-Video Connection

Connect the S-VIDEO OUT socket on the DVD player to the S-Video input socket on the television using S-Video cable (S).

Component Video Connection

Connect the COMPONENT VIDEO OUT socket on the DVD recorder to the corresponding input socket on the television using a Y Pb Pr cable (C).

Audio Connection (Left/Right)

Connect the left and right AUDIO OUT sockets on the DVD recorder to the left and right IN sockets on the television using the audio cable (A).

What is "Digital Out"?

If your Loewe TV set has an AC3 module or a DIS module you should connect to with the DVD recorder using Digital Audio. Connect the DIGITAL OUT socket on the DVD recorder to the DIGITAL IN socket on the TV set. Then assign the AV socket on the TV set to the DIGITAL IN socket using the TV menu SETTINGS → AV-SETTINGS → AUDIO DIGITAL.

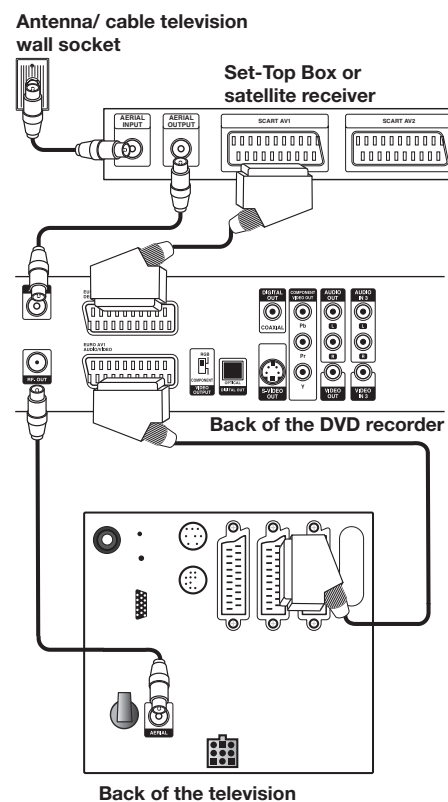
Note: If you use the COMPONENT VUEO OUT connections, switch the VIDEO OUTPUT switch to COMPONENT. If you use the SCART socket, switch the VIDEO OUTPUT switch to RGB.

Connecting to a Set Top Box / Satellite Receiver

If you use a cable or satellite receiver with integrated decoder, connect it to your recorder and television set as described below. If you use a separate decoder box for your cable/satellite television, follow the instructions in the next section "Connecting to an External Decoder Box".

1. Connect the aerial cable as shown. This enables you to watch and record TV channels.
2. Connect the EURO AV1 AUDIO/VIDEO socket to a EURO AV socket on your television using the SCART cable. This enables you to watch discs.
3. Connect the EURO AV2 DECODER socket to the EURO AV socket on your Set Top Box / satellite receiver using a SCART cable. This enables you to watch the TV channels.

Notes: This recorder is equipped with a „Loop-Through“ function. This function enables you to record a television broadcast from this recorder's integrated TV tuner whilst watching a satellite or Set Top Box channel (see page 43). Do not connect the recorder „via“ your video recorder, satellite receiver or Set Top Box.



Initial Installation

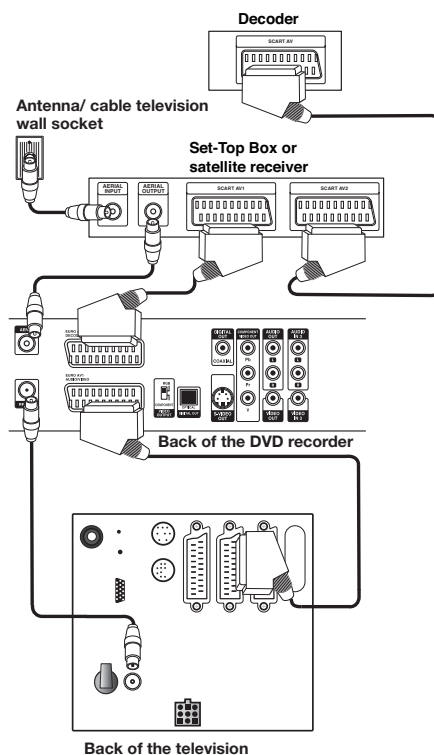
Connecting to an External Decoder Box

If you use an external decoder box for your satellite or cable TV system, follow the connection procedure described below.

1. Connect your aerial socket in the wall to the aerial input socket on your Set Top Box / satellite receiver using an aerial cable.
2. Connect the decoder to the EURO AV DECODER socket on the Set Top Box /satellite receiver using a SCART cable. Further instructions can be found in the manual for your decoder box.
3. Connect the EURO AV2 socket on the DVD recorder to a EURO AV socket on your Set Top Box / satellite receiver using a SCART cable.
4. Connect the EURO AV1 socket on the DVD recorder to a EURO AV socket on your television using the SCART cable.

Caution:

- Do not connect the decoder box directly to your recorder.
- Information from the decoder (e.g. about Pay TV services) can only be viewed if the recorder is switched off (standby mode).
- For timer recordings to work properly on this recorder, the satellite / Set Top Box must also be switched on during recording.
- With this configuration you cannot watch one television broadcast and record another at the same time.



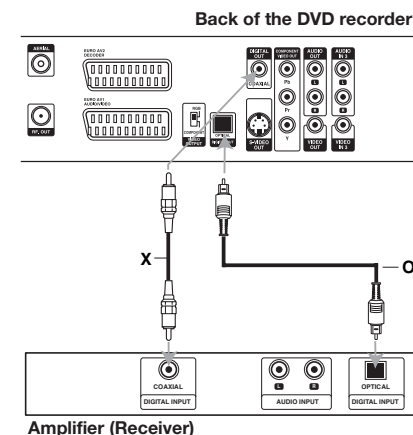
Connecting to an Amplifier

Connecting to an amplifier equipped with analog 2 channel stereo or Dolby Pro Logic II / Pro Logic

Connect the left and right AUDIO OUT sockets on the DVD recorder to the left and right AUDIO IN sockets on the amplifier, receiver or stereo system using the audio cable (A).

Connecting to an amplifier equipped with two channel digital stereo (PCM) or to an Audio/Video receiver equipped with a multi-channel decoder (Dolby Digital™, MPEG 2 or DTS).

1. Connect one of the DIGITAL AUDIO OUT sockets (OPTICAL **O** or COAXIAL **X**) on the DVD recorder to the corresponding input socket on your amplifier. Use the appropriate digital audio cable (Optical **O** or Coaxial **X**).
2. You must configure the digital output of the recorder (see "Audio" on page 22).



Digital Multi-Channel Sound

A digital multi-channel connection offers the best sound quality. For this you need a multi-channel Audio/Video receiver that supports one or more audio formats e.g. MPEG 2, Dolby Digital and DTS. More information can be found in the receiver manual and on the logos on the front of the receiver.

Caution: Due to the DTS licensing agreement the digital output will be to DTS Digital Out when a DTS audio stream is selected.

Notes:

- If the audio format of the digital output does not

Initial Installation

correspond to the capabilities of your receiver, the receiver will emit a strong distorted sound or no sound at all.

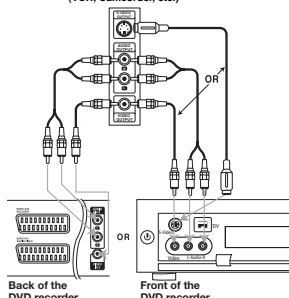
- 5.1 digital surround sound via the digital connection can only be obtained if your receiver is equipped with a digital multi-channel decoder.
- You can obtain information about the audio format of the current DVD via the "Disc Info" menu (see page 28 and 33).
- This recorder does not perform internal (2-channel) decoding (downmix) of a DTS sound track. To enjoy DTS multi-channel surround sound, you must connect this recorder to a DTS compatible receiver via one of the recorder's digital audio outputs.

Connecting to Audio/Video (A/V) Accessories

Connect the DVD recorder's input sockets (AV3 = AUDIO IN 3 / VIDEO IN 3 on the back of the unit or AV4 = input 4 on the front of the unit (see page 4)) to the audio/video out sockets on the accessory component using audio/video cables.

Note: If you use the S-VIDEO IN socket on the front panel, the VIDEO IN socket on the front panel cannot be used.

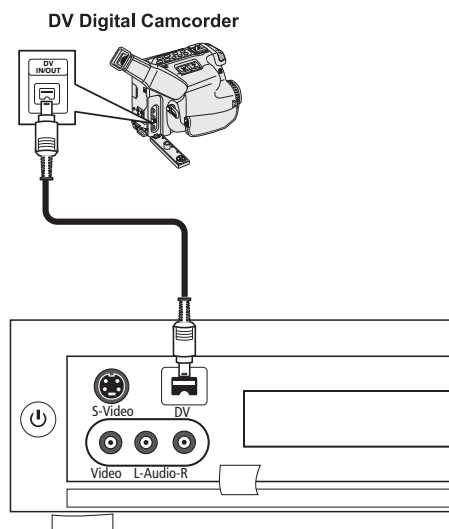
Connector block for an accessory component (VCR, Camcorder, etc.)



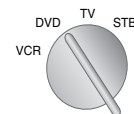
Connecting to a Digital Camcorder

You can connect a digital camcorder (DV) or a digital DVD-R/RW recorder to the DV IN socket on the front panel and digitally transfer the content of DV tapes or DVD-R/RW discs onto DVD-R/RW discs. Use a DV cable (not supplied) to connect the DV IN/OUT socket on your camcorder/video deck to the DV IN socket on the front panel of this recorder.

Note: Only DV units can be connected to this socket (The source signal must be in the DV-25 format; see page 46 and 47). It is not compatible with digital satellite tuners or S-VHS video decks.



Basic Settings



Set the rotating switch on the remote control to DVD mode.



Push the On/Off button on the DVD recorder or ...



... the On/Off switch on the remote control.

The menu system offers several ways of changing settings. Most menus consist of three levels for setting up options. If you press **MENU**, only the first and second levels of the menu system are displayed on the screen. You can display the third level by pressing "▶". When navigating in the menus, "▶" on the right side of the menu tab shows you that the next level can be called up.

Main Menu:

 	Auto Programming	✓ Automatic ▶ Manual Date -- / -- Year ---- Time -- : --
	Program Edit	
	Clock Set	
	TV Aspect	
	Display Mode	
1st Level	AV1 to Decoder	2nd Level
	PBC	
	Factory Set	3rd Level

Initial Installation

Navigating in Menus

In this operating manual the RC3 remote control arrow keys are represented as follows:



The arrows correspond to "▲ ▼ ◀ ▶" in the text. The OK function is represented as "OK" in the text.

1. Press **MENU**.
The menu is displayed.
2. Select the desired option with ▲ / ▼.
3. The desired entry is selected. Press ▶ to call up the corresponding second level.
4. Select the second option with ▲ / ▼.
5. Press ▲ / ▼ to call up the corresponding third level.
6. Use ▶ to select the desired settings and confirm your selection with **OK**.
Some options required additional steps.
7. Press **MENU** to quit the menu.

Activating Digital Link

With Digital Link, Loewe TV sets pass on the remote control signals to Centros via the Euro-AV connection. Digital Link is useful if you want to install Centros in a concealed place, e.g. in a closed rack.

- Switching on Digital Link.
Centros must be switched on. Press the key **on Centros** for > 3 secs. "LINK" appears briefly in the Centros display.
- Switching off Digital Link.
Centros must be switched on. Press the key **on Centros** for > 3 secs. "FRONT" appears briefly in the Centros display.

The General Menu



Automatic Programming

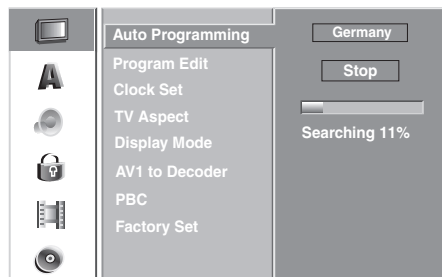
This DVD recorder is fitted with a tuner capable of receiving up to 88 channels.

Note: The channel is set automatically when using Digital Link Plus.

Preparation:

Connect the DVD recorder to the aerial system. See "Connecting to the Aerial" on page 13.

1. Press **MENU**.
The menu is displayed.
2. Select the "General" option with ▲ / ▼.
3. Press ▶ to call up the second level.
4. Select the "Auto Programming" option with ▲ / ▼.
5. Press ▶ to call up the third level. The country option is highlighted.
6. Select a country with ▲ / ▼ and press ▶.
The "Start Search" symbol is highlighted.
7. Press **OK** to start the program search.
The tuner cycles automatically through all available channels and transfers all programs found to the tuner's memory.



Digital Link Plus

If you have connected the DVD recorder to a Loewe TV set with Digital Link Plus or a comparable system from another manufacturer (e.g. EasyLink, Mega Logic, Project 50), the program list will be transferred from the television set to the DVD recorder. This takes place when you register the DVD recorder with the TV set, or when you make any changes to the programs on the TV set (re-sorting, deleting, adding). After a change of this sort, the TV set will ask you to start transferring the changed program list.

The DVD recorder detects a connected TV set with Digital Link Plus or a similar system from another manufacturer and adjusts the DVD recorder accordingly. This means that you cannot search for, delete or sort TV programs on the DVD recorder. The menu items are grayed out; during the automatic search it is only possible to transfer the program information from the TV set.

Note that all programs that you receive via aerial or cable must be stored in program numbers 1 to 88 on the TV set.

If the TV set does not ask you to transfer the program information, then start the transfer on the DVD recorder.

If your TV set is equipped with Digital Link Plus or with a comparable system from another manufacturer, only carry out program changes on the TV set.

If the TV set that you have connected to the DVD recorder does not have Digital Link Plus or a comparable system, then you should harmonize the DVD recorder and TV set program lists. This will help you to find programs on the TV set and DVD recorder.

Initial Installation

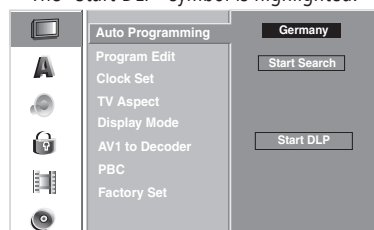
Preparation

Connect the DVD recorder to the TV set with Digital Link Plus using a SCART connection. See "Connecting to the Television" on page 14.

Activate Digital Link on the DVD recorder as described on page 17.

Transfer program list

1. Press **MENU**.
The menu is displayed.
2. Select the "General" option with **▲ / ▼**.
3. Press **▶** to call up the second level.
4. Select the "Auto Programming" option with **▲ / ▼**.
5. Press **▶** to call up the third level. The country option is highlighted.
6. Select a country with **▲ / ▼** and press **▶**.
The "Start DLP" symbol is highlighted.

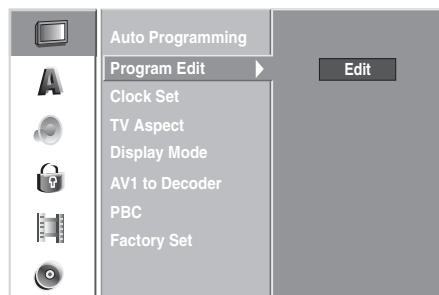


7. Press **OK** to start transferring the program list stored in the TV to the DVD recorder.
This may take a few seconds. During the transfer the DVD recorder display shows "DLP".

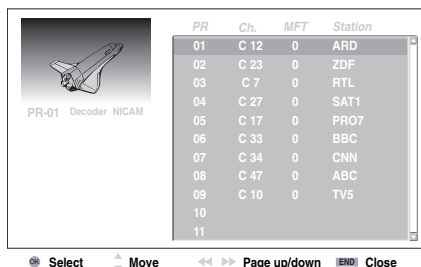
Note: (Centros 1172). With Digital Link Plus, French stations are only broadcast in the correct standard if you have previously selected "France" as the country (see Point 6 above).

Channel Setting

You can edit a channel manually (add, delete, rename, move etc.).

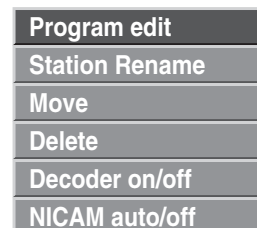


1. Press **MENU**. The menu is displayed.
2. Select the "General" option with **▲ / ▼**.
3. The "GENERAL" entry is selected. Press **▶** to call up the second level.
4. Use **▲ / ▼** to select the "Channel Setting" option. Then press **▶** to move to the third level. The "Change" symbol is highlighted.
5. Press **OK**. The "Program List" menu is displayed..



6. Use **▲ / ▼** to select a PR number, and press **OK**. All available options that can be used on the highlighted program are shown in the bottom left field.

7. Use **▲ / ▼** to select an option, and press **OK** to confirm.



Program edit: Search, channel entry, fine tuning.

Station Rename: Change name.

Move: Move a program in the program list.

Delete: Deleting programs from the program list

Decoder on/off: Divert program via decoder ("on").

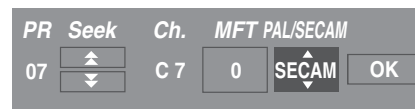
NICAM auto/off: Switch off NICAM reception ("off")

8. Press **END** or **MENU**, to quit the "Program List" menu.

Edit program

Alongside automatic programming it is also possible to set and save programs manually.

1. Use **▲ / ▼** to select a program in the "Program List" menu, and press **OK**. The options are displayed on the left side of the "Program List" menu.
2. Use **▲ / ▼** to select the "Program Edit" option and press **OK**. The "Program Edit" menu is displayed.



3. **◀ / ▶** (left/right): Moves the cursor to the previous or next column.
▲ / ▼ (up/down): Changes the settings of the current cursor position.

Initial Installation

PR: Indicates the programm number (display only)

Seek: Automatically searches for station. Use ◀ / ▶ to select the "Seek" option and then press ▲ / ▼. Searching stops when the DVD recorder receives a station.

Channel: Changes the channel number. Use ◀ / ▶ to select the "Channel" option and then press ▲ / ▼.

MFT: Changes the frequency to fine-tuning. Use ◀ / ▶ to select the "Fine" option and then press ▲ / ▼.

PAL/SECAM (with Centros 1172): Changes the receiver standard. If there is interference with the image, use ◀ / ▶ to select the "PAL/SECAM" option and then use ▲ / ▼ to select "SECAM" for the SECAM-L standard.

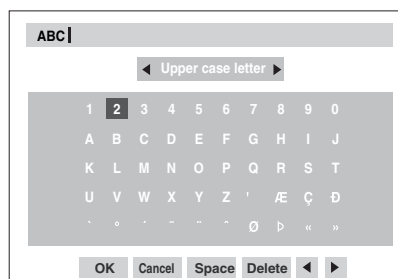
4. Then press **OK** to confirm the settings and return to the "Program list" menu.

Note: If the DVD recorder has got the station from a Loewe television via Digital Link Plus (DLP), the "Edit programme", "Move" and "Delete" functions are blocked and can only be used once more when the station is overwritten again by automatic programming.

Renaming stations

You can give whatever name you like to a station. Names should have a maximum of five characters.

1. Use ▲ / ▼ to select a programme in the "Programme list" and press **OK**. The options are displayed on the left-hand side of the "Programme list" menu.
2. Use ▲ / ▼ to select the "Rename station" option, and press **OK**. The "Keypad" menu is displayed.



3. Enter a name for the station. Use ▲ / ▼ ◀ / ▶ to select a character and press **OK**.

- **Upper case letter:** Switches the keypad so that only upper case is used.
- **Lower case letter:** Switches the keypad so that only lower case is used.
- **Symbols:** Switches the keypad to symbol characters.
- **ABC...123:** Inserts the corresponding character at the cursor position.
- **OK:** Select this option to end and save.
- **Cancel:** Select this option to close the menu. Any changes made will be discarded.
- **Space:** Inserts a space at the cursor position.
- **Delete:** Deletes the character to the left of the cursor position.
- ◀ / ▶: Moves the cursor to the left or right.

Note: Remote control buttons for keying in a name (all selections must be confirmed using the remote control's **OK** button).

▶ : Inserts a space at the cursor position.

⏏ : Deletes the character to the right of the cursor position.

◀ : Deletes the character to the left of the cursor position.

P+ / P-: Moves the cursor to the left or right.

TEXT, INFO: Toggles the keypad between upper case, lower case and symbols.

4. Then press **OK** to confirm the settings and return to the "Program list" menu.

Moving programmes

You can sort the programme positions in the "Programme list" menu.

1. Use ▲ / ▼ to select a programme in the "Programme list" and press **OK**. The options are displayed on the left-hand side of the "Programme list" menu.
2. Use ▲ / ▼ to select the "Move" option, and press **OK**.
3. Use ▲ / ▼ to select the position you require. Then press **OK** or **END** again in the programme list to change.

Deleting a programme

You can delete a programme from the "Programme list" menu.

1. Use ▲ / ▼ to select a programme in the "Programme list" and press **OK**.
2. Use ▲ / ▼ to select the "Delete" option, and press **OK**. The programme is deleted.

Decoder on/off

1. Use ▲ / ▼ to select the programme that you wish to reroute via the decoder and press **OK**. The options are displayed on the left-hand side of the "Programme list" menu.
2. Use ▲ / ▼ to select the "Decoder on/off" option, and press **OK**. When you select "on", "Decoder" appears under the program shown in the small picture.

Initial Installation

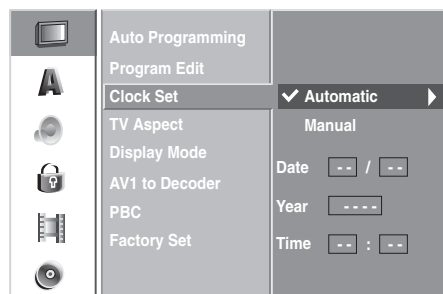
NICAM auto/off

This DVD recorder can receive Hi-Fi sound transmissions in NICAM Stereo. Bad reception can however cause distortion. You can switch the function off ("off").

1. Use $\blacktriangle$ / $\blacktriangledown$ to select a program in the "Program List" menu, and press **OK**. The options are displayed on the left side of the "Program List" menu.
2. Use $\blacktriangle$ / $\blacktriangledown$ to select the "NICAM auto/off" option from the program list and press **OK**. If you select "auto", "NICAM" appears under the program shown in the small picture.

Setting the Clock

If the automatic channel search is finished, the date and time will also be set automatically (depending on the broadcasting station), the same is true when the power supply returns after a power cut or after the mains cable has been unplugged. The "Automatic" option must be set to enable this.



1. Press **MENU**.
The menu is displayed.
2. Select the "General" option with $\blacktriangle$ / $\blacktriangledown$.
3. Press $\blacktriangleright$ to call up the second level.
4. Select the "Clock" option with $\blacktriangle$ / $\blacktriangledown$.
5. Press $\blacktriangleright$ to call up the third level.

6. Press $\blacktriangle$ / $\blacktriangledown$ to select the "Automatic" option and then press **OK**.

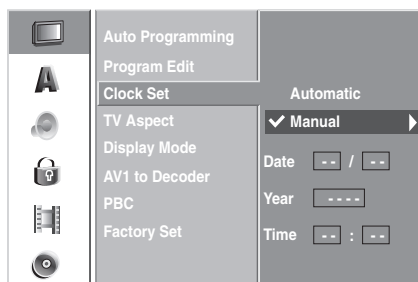
7. Press **MENU**, to quit the menu.

Note: Check whether the automatic year and date setting is correct. If necessary they must be set manually.

Manual Setting of the Date / Time

It is possible that the television station may broadcast incorrect date and / or time information or no information at all and that the DVD recorder sets the incorrect time. If this is the case we recommend that you set the clock manually.

1. Follow steps 1 - 5 as described above (Automatic Clock Setting).
2. Use $\blacktriangle$ / $\blacktriangledown$ to select the "Manual" option and then press **OK**.

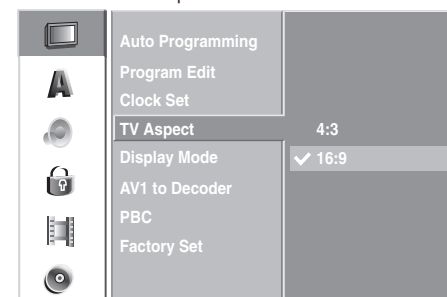


3. Then enter the necessary date and time information.
 $\blacktriangleleft$ / $\blacktriangleright$ (left/right): Moves the cursor to the previous or next column/line.
 $\blacktriangle$ / $\blacktriangledown$ (up/down): Changes the setting at the current cursor position.
4. You can return to the 2nd level by pressing **OK** or you can close the menu with **MENU**.

TV Aspect

You can choose:

- 4:3: Select this setting if a television set with 4:3 picture format is connected.
- 16:9: Select this setting if a widescreen television set with 16:9 picture format is connected.

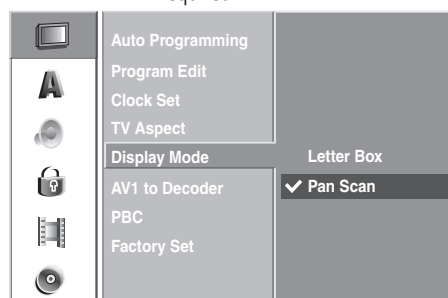


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Screen Mode

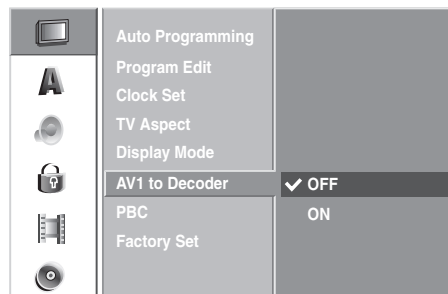
The screen mode setting is only available if the TV aspect of the television is set to 4:3. You can choose:

- Letter Box: Widescreen format recordings appear with black borders at the top and bottom of the screen.
- Pan Scan: The picture fills the whole screen but cuts off areas at either side that do not fit on the screen if required.



AV1 on Decoder

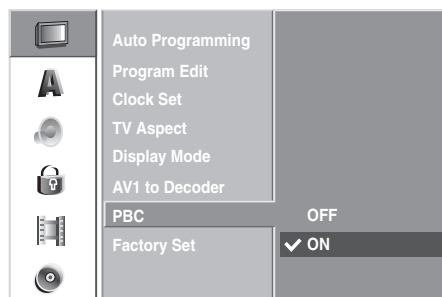
We have already described how to connect a decoder on page 15. If you also want to use an analog decoder for you TV set (programs to be decoded are sent via the DVD recorder to the decoder) you must set "AV1 on Decoder" to "On". If it is set to "Off" the decoder is only available to the DVD recorder.



Playback Control - PBC

VCD, SVCD

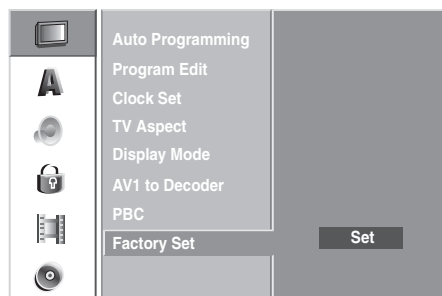
If a VCD (or SVCD) contains playback control (PBC) features and if "PBC" in the menu is set to "On", then the disc playback is controlled via the menu contained on the disc. Otherwise the VCD is played in the same way as an audio CD.



Factory Settings

If required you can restore all the factory settings on the recorder. Select the "Execute" symbol and press **OK**.

Note: Some options cannot be reset (security rating, password and country code, program list, timer list).



Language Menu



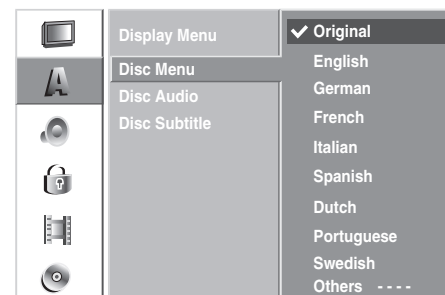
Menu Language

Select a language for the menus and dialogs displayed by the DVD recorder.



Disc Languages

Select a language for the disc's menu, audio and subtitles.



These are presettings and, if available, are set after inserting the disc. Otherwise the "Original" version of the disc is used.

- Original: The original language of the disc is selected.
- Others: To select another language, select "Other" and press **OK**. Use the number keys and the **OK** button to enter the appropriate four-digit number in agreement with the language code on page 68. If you input the code incorrectly, press

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◀ repeatedly to delete the entry character by character and then correct it before you press **OK**.

Audio Menu

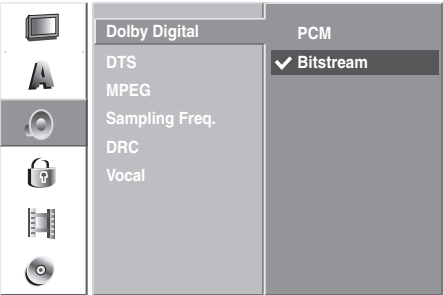
Each DVD disc offers a variety of audio formats. Set the audio format for the recorder according to the type of audio system you are using.



Dolby Digital

PCM: Select this option if the unit is connected to a digital two channel stereo amplifier. The DVD recorder's digital audio outputs emit sound in PCM 2 channel format if you play a DVD-Video disc with Dolby Digital audio format.

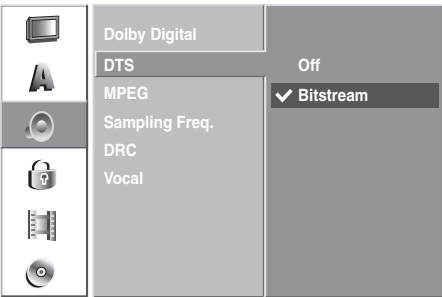
Bitstream: Select "Bitstream" if you have a Dolby Digital decoder (or amplifier, a Loewe TV with AC3 or DIS module or another unit with Dolby Digital decoder) connected to the DIGITAL OUT socket of the DVD recorder.



DTS

Off: If you select "Off" the DTS signal is not emitted from the DIGITAL OUT socket.

Bitstream: Select "Bitstream" if you have a Dolby Digital decoder (or amplifier, a Loewe TV with AC3 or DIS module or another unit with Dolby Digital decoder) connected to the DIGITAL OUT socket of the DVD recorder.



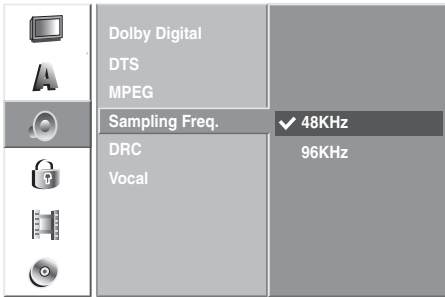
MPEG

PCM: Select this option if the unit is connected to a digital two channel stereo amplifier. The DVD recorder's digital audio outputs emit sound in PCM 2 channel format if you play a DVD-Video disc with Dolby Digital audio format.

Bitstream: Select "Bitstream" if you have a Dolby Digital decoder (or amplifier, a Loewe TV with AC3 or DIS module or another unit with Dolby Digital decoder) connected to the DIGITAL OUT socket of the DVD recorder.

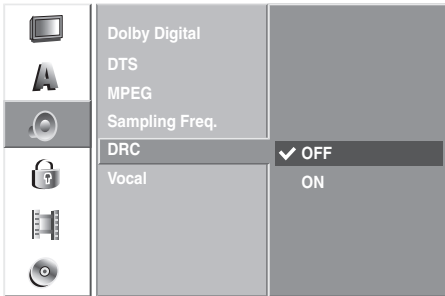
Sampling Frequency

If your receiver or amplifier is NOT designed for 96 kHz signals, select 48 kHz. If you have made this selection, the unit automatically converts the 96 kHz signals to 48 kHz signals that the system can decode. If your receiver or amplifier is designed for 96 kHz signals, select 96 kHz.



Night Mode

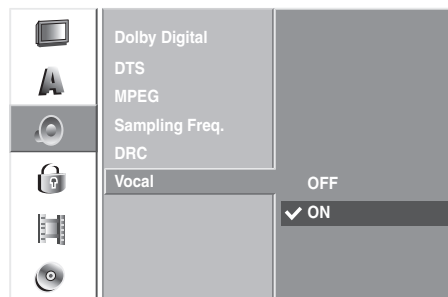
Thanks to digital audio technology the DVD format enables you to hear soundtracks in the most accurate and realistic way possible. However, you may wish to limit the dynamics (i.e. the difference between the loudest and the quietest sounds). In this way you can play a film with minimum volume differences. For this purpose switch "Night Mode" to "On".



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Karaoke Audio

Switch the singing option (karaoke audio) on, if you want to play a multi-channel karaoke DVD. The karaoke channels on the disc are mixed into normal stereo sound.

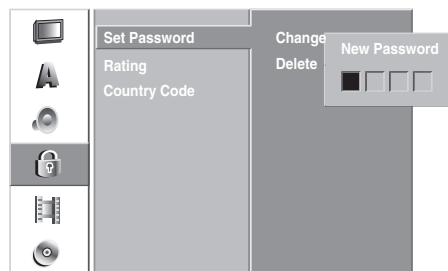


Lock Menu



Password

Changing the 4-digit code



1. Press **MENU**. The menu is displayed.
2. Select the lock option with **▲ / ▼**.
3. The lock entry is selected. Press **▶** to call up the second level.
4. Select the "Password" option with **▲ / ▼**.
5. Press **▶** to call up the third level.

6. If you have not yet entered a password:

Enter a 4-digit code with the number keys to create a personal password and press **OK**. Enter the 4-digit password again for security and press **OK** to confirm.

If you have already entered a password:

Enter the password and press **OK**.

Note: If you make a mistake, press **◀** repeatedly to delete or correct the password digits one after the other before pressing **OK**.

7. If the "Change" option is selected, press **OK**.

8. Enter a new 4-digit password using the number keys and press **OK**.

9. Then enter the password again for security and confirm by pressing **OK**.

Note: If you input the code incorrectly, press **◀** repeatedly to delete or correct the password digits one after the other before pressing **OK**.

Delete Password

If you want to switch the password protection off, proceed as follows.

1. Press **MENU**. The main menu is displayed.
2. Select the lock option with **▲ / ▼**.
3. The lock entry is selected. Press **▶** to call up the second level.
4. Select the "Password" option with **▲ / ▼**.
5. Press **▶** to call up the third level.
6. Select the "Delete" option and press **OK**.
7. Enter the current 4-digit password using the number keys and press **OK**.

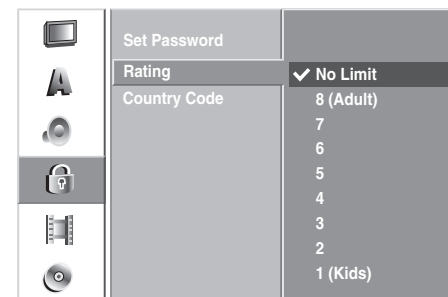
Have you Forgotten the Current Password?

If you have forgotten your password, proceed as you would to delete the current password.

1. Press **MENU** to display the menu.
2. Use the number keys to enter the 6-digit code "210449".
3. Select "Yes" and press **OK**. The 4-digit password is deleted. Enter a new code as shown left.

Rating

Films on DVD can contain scenes that are not suitable for children. For this reason discs can contain child protection information that applies to the whole disc or only to certain scenes on the disc. The ratings are country-dependent. The child lock function enables you to prevent your children watching certain discs or scenes.



1. Follow steps 1 - 3 as described in "Password".
2. Select the "Rating" option with **▲ / ▼**.
3. Press **▶** to call up the third level.
4. Follow step 6 as described left (see „Password“).
5. Select a protection level between 1 and 8 using the **▲ / ▼** keys. 1 has the least playback limitations. 8 has the most playback limitations.

No Limits: If you select "No Limits" the child

Initial Installation

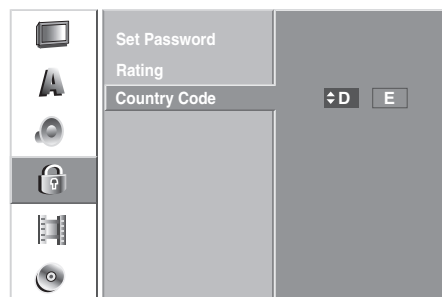
lock is not active. The disc will play in full.

Steps 1 to 8: Some discs contain scenes that are not suitable for children. If you assign a security rating to your DVD recorder it will only play the scenes on the inserted disc that correspond to or are below the assigned security rating. Scenes of a higher level on the DVD will only be played if appropriate replacement scenes are available on the disc. The alternative scenes must have the same or a lower security rating. If no suitable alternative is found, play is stopped. You must enter the 4-digit password or change the rating level to continue to play the disc.

6. Press **OK** to confirm the selected security rating. Press **MENU** to quit the menu.

Country Code (for Rating)

Enter the code for a country/region whose standards are to be used to rate the DVD-Video disc. (See "Country Code List" on page 69.) For Great Britain select „G B“.



1. Press **MENU**.
The MENU menu is displayed.
2. Select the "Lock" option with $\blacktriangle / \blacktriangledown$.
3. The "Lock" entry is selected. Press $\blacktriangleright$ to call up the second level.
4. Select the "Country Code" option with $\blacktriangle / \blacktriangledown$.
5. Press $\blacktriangleright$ to call up the third level.
6. **If you have not yet entered a password:**
Follow step 6 as described on page 23 under "Password".
7. Select the first character with the $\blacktriangle / \blacktriangledown$ keys.
8. Move the cursor using the $\blacktriangleright$ key and select the second character with the $\blacktriangle / \blacktriangledown$ keys.
9. Press **OK** to confirm the selected country code. Press **MENU** to quit the menu.

Recording Menu

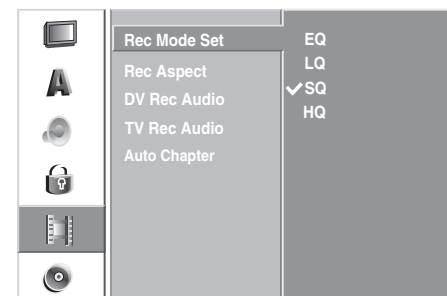


Recording Quality

You can set the picture quality for recording:

- EQ (Super Long Play),
- LQ (Long Play),
- SQ (Standard Quality),
- HQ (High Quality).

See also page 61 for further details.

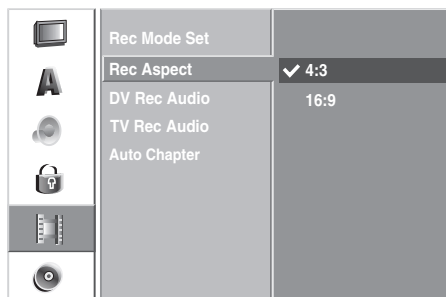


1. Press **MENU**.
The menu is displayed.
2. Select the "Recording" option with $\blacktriangle / \blacktriangledown$.
3. The "Recording" entry is selected. Press $\blacktriangleright$ to call up the second level.
4. Select the "Rec Mode Set" option with $\blacktriangle / \blacktriangledown$.
5. Press $\blacktriangleright$ to move to the third level.
6. Use $\blacktriangle / \blacktriangledown$ to select the desired recording quality (HQ, SQ, LQ or EQ).
7. Press **OK** to confirm the selection and then **MENU** to quit the menu.

Initial Installation

Recording Format

When recording you can set the picture format (16:9 or 4:3) to suit the picture material you are recording.



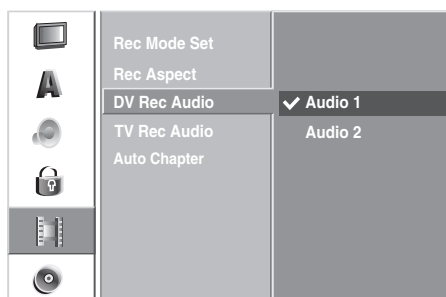
DV Audio

You need to use this setting if your camcorder with 32 KHz / 12-bit is connected to the DV IN socket on the front panel.

Some digital camcorders have two stereo tracks for audio. One is used for recording, the other is used for post-editing.

On the Audio 1 setting the original sound is recorded.

On Audio 2 setting the edited sound is used.



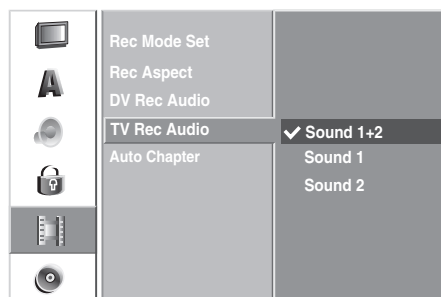
TV Audio

When recording bilingual TV you can select the audio channel to be recorded.

Audio 1+2: both languages are recorded

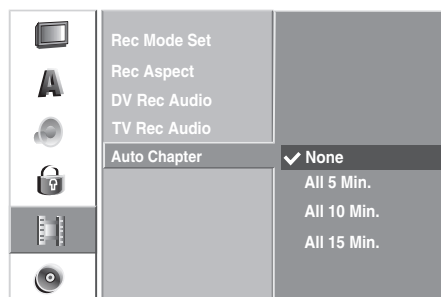
Audio 1: language 1 only

Audio 2: language 2 only



Automatic Chapter

During recording chapter markers are placed at fixed intervals. You can select intervals of 5, 10 or 15 minutes. If you select "None" automatic chapter setting is switched off.



Disc Menu



Formatting

If you insert a completely empty disc it is automatically formatted by the recorder (see table on page 11).

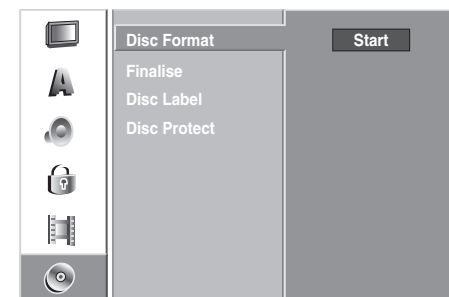
DVD-R: The recorder formats the disc in Video mode.

DVD-RW: The recorder formats the disc in VR mode.

DVD+R: The recorder formats the disc in Video mode.

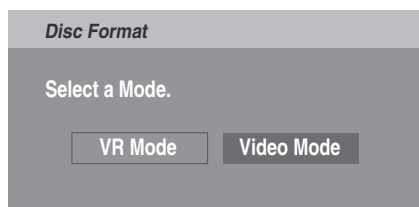
DVD+RW: The recorder formats the disc in Video mode.

A RW disc can also be formatted at a later date via the menu.

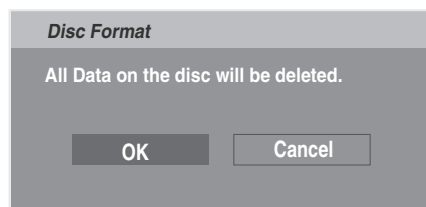


1. Press **MENU**.
The menu is displayed.
2. Select the "Disc" option with **▲ / ▼**.
3. The "Disc" entry is selected. Press **▶** to call up the second level.
4. Select the "Formatting" option with **▲ / ▼**.
5. Press **▶** to call up the third level. The "Start" symbol is highlighted.
6. Press **OK**. The „Formatting“ menu is displayed.
7. For DVD-RW select the desired type of formatting (VR mode or Video mode) with **◀ / ▶** and then press **OK**.

Initial Installation



8. Use ◀ / ▶ to select "OK", and press **OK**.
9. The following prompt appears:



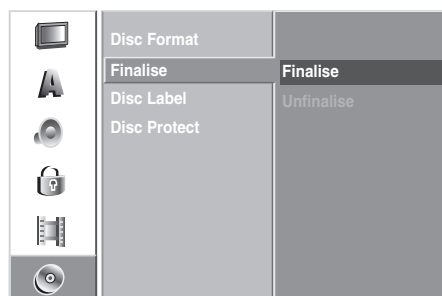
Caution: When you start formatting all recordings on the disc are deleted.

10. After pressing **OK** disc formatting begins. It can take a few minutes.

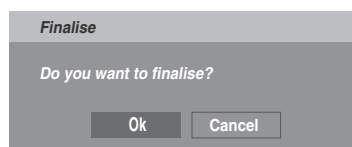
Finalization

Finalization fixes recordings so that the disc can be played on a regular DVD player or a computer with a suitable DVD-ROM drive. During finalization of a Video mode disc a menu is created for disc navigation. You can access the menu by pressing the **TEXT** button.

Caution: Following recording and finalization of DVD-R and DVD+R discs no other editing or recording can take place. This does not however apply for a DVD+RW and DVD-RW disc.



1. Follow steps 1 - 3 described on page 25 (Formatting).
2. Select the „Finalization“ option with ▲ / ▼.
3. Press ▶ to call up the third level. "Finalization" is highlighted.
4. Press **OK**. The "Finalization" menu is displayed.



5. Press **OK**. The recorder starts finalization of the disc.

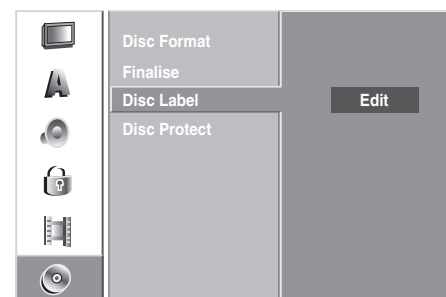
Note: The time needed for finalization depends on the type of disc, how much is recorded on the disc and the number of titles on the disc. Finalization of a prerecorded disc can take up to 8 minutes.

Tip: If you insert a finalized DVD-RW or DVD+RW disc, the finalization can be reversed by selecting "Unfinalize" in the "Finalization" menu. Then the disc can be edited and re-recorded.

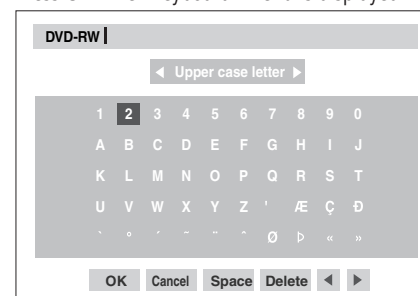
Disc Name

Use this option to enter a name for the disc. The name is displayed when the disc is loaded and when you display disc information on the screen.

- The disc name can be up to 32 characters long.
- For discs formatted on other DVD recorders you will only see a limited character set.



1. Follow steps 1 - 3 described on page 25 (Formatting).
2. Select the „Disc Name“ option with ▲ / ▼.
3. Press ▶ to call up the third level. The "Edit" symbol is highlighted.
4. Press **OK**. The "Keyboard" menu is displayed.

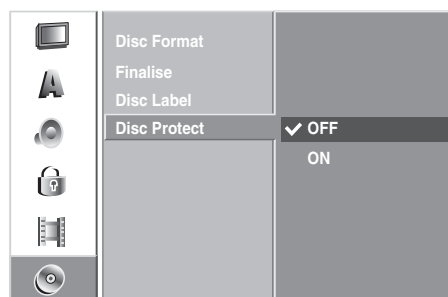


5. Enter a name for the disc. Use ▲ ▼ ◀ ▶ to select a character. Then press **OK** to use the character in the name. See step 3 on page 19 (Renaming a Station).
6. Select OK and then press **OK** to save the name and to return to the „Disc“ menu.
7. Press **MENU** to quit the menu.

Initial Installation

Disc Protection

When recording onto a DVD+RW/+R disc in DVD+RW disc mode protection should be switched to "On" to avoid inadvertant recording, changing or deleting of the disc. To release the disc again, select "Off".



Additional Screen Menus

This manual contains basic instructions for operating the DVD recorder. Some DVDs require specific handling or only permit limited operation during playback. If this is the case the  symbol appears on the screen. This indicates that certain operations are not permitted at certain points or that no menu is available on the disc.

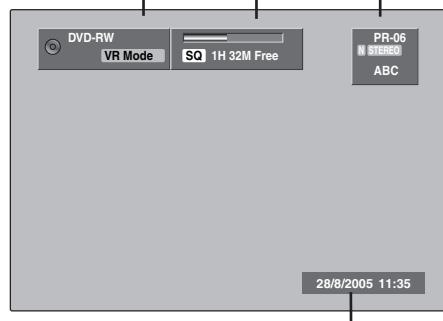
Displaying Information when the DVD Recorder is Supplying the TV Broadcast.

If you are watching a TV program that is being supplied by the integrated receiver in the DVD recorder (DVD recorder is in stop mode), then you can show (and hide) information about the TV program and the disc in the player by pressing **OK** or . Example: A DVD-RW disc in VR mode is inserted and the program 06 called "ABC" is currently running:

Indicates the channel number, station name and the audio signal (NICAM, STEREO, MONO) for the current broadcast.

Indicates in a progress bar the ratio of used to free space on the inserted disc, the free space in minutes and the recording quality (for other discs see next page)

Indicates the name and format of the disc.



Indicates the current date and time.

Displaying Disc Information on the Screen during Disc Playback

You can display a variety of information about the inserted disc on the screen.

1. Press  twice to show disc information whose parameters can be changed.
2. To hide the screen display again, press  or .

A detailed explanation of how to play a disc can be found on the following pages.

Temporarily Visible Symbols

 Resume play from this point

 Action prohibited or not available

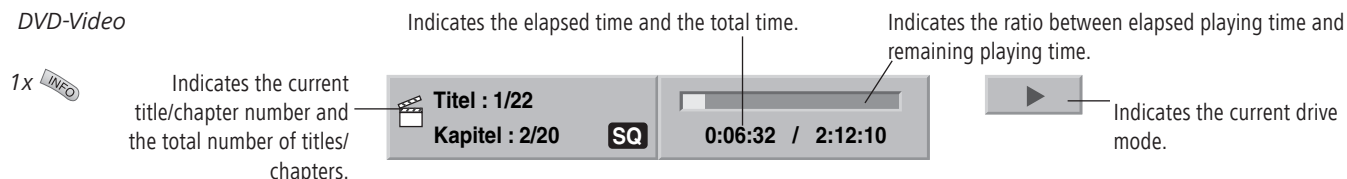
Notes:

1. Not all discs have all the functions described on the following pages.
2. If no button is pressed for ten seconds the screen menu disappears.

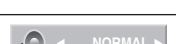
Initial Installation

Display of disc Information during playback with on the Screen

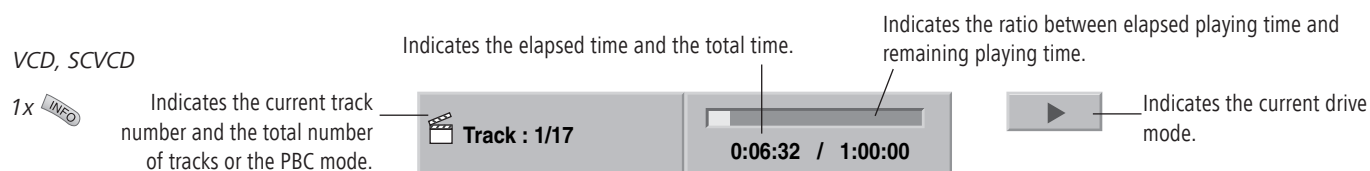
DVD-Video



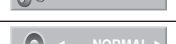
2x 

Menu Options	Function (Use  /  to select the desired option)	Selection Methods
Title	 1/6	 /  or numbers, OK
Chapter	 4/26	 /  or numbers, OK
Time	 0:10:30	 /  or numbers, OK
Audio	 1. ENG DQ D 5.1CH	 / 
Subtitles	 OFF	 / 
Camera	 1/3	 / 
Sound	 NORMAL	 / 

VCD, SCVCD



2x 

Menu Options	Function (Use  /  to select the desired option)	Selection Methods
Track	 1/4	 /  or numbers, OK
Time	 0:10:30	—
Audio	 STEREO	 / 
Sound	 NORMAL	 / 

Initial Installation

Display of disc Information during playback with on the Screen (Continued)

DVD-VR

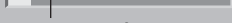
1x 

Indicates the title name, recording date,
recording quality etc.
ORG: Original , PList: Playlist

Indicates the elapsed time and the total time.

Indicates the ratio between elapsed playing time
and remaining playing time.

 Titel: 1/22
Kapitel: 2/20 **ORG** **SQ**


0:06:32 / 2:12:10



Indicates the current
drive mode.

2x 

Menu Options		Function (Use  /  to select the desired option)	Selection Methods
Title	  1/6 	Indicates the current title number and the total number of titles and skips to the desired title number.	 /  or numbers, OK
Chapter	  4/26 	Indicates the current chapter number and the total number of chapters for the current title and skips to the desired chapter number.	 /  or numbers, OK
Time	 0:10:30	Indicates the elapsed playback time and forwards the film to the desired point.	 /  or numbers, OK
Audio	 1. STEREO  D 2CH	Indicates the current film language and the current audio format and changes these settings.	 / 
Subtitles	  OFF 	Indicates the current subtitle language and changes the settings.	 / 
Sound	  NORMAL 	Indicates the current audio mode and changes the settings.	 / 

Using DVDs and Video CDs

Playing back a DVD or video CD (VCD, SVCD)

Preparing for playback

Switch the television on and set the video source to be the input that the DVD recorder has been connected to or activate the "Control voltage" option for the television's AV input.

If you have connected the DVD recorder to an audio system, switch on the audio system and, as the source, set the input that the DVD recorder has been connected to.

1. Press  on the unit to open the disc drawer.
2. Insert the disc that you have selected, with the side that is to be played back face-down, in the drawer.
3. Press  on the unit to close the disc drawer.
4. READING shows on the display while disc recognition is in progress.

Play

When the disc has been recognised, playback begins automatically (if it does not, start it manually ) and the menu on the disc will display (or the film will start immediately if there is no such menu). When the disc menu appears, proceed as follows:

DVD: Use the     buttons to select the title or chapter that you wish to see. Then press **OK** to start playback.

VCD: Use the number buttons to select the track you want.

The disc's menu options and its precise mode of operation may differ from disc to disc. Follow the instructions on each menu page.

Further information can be found from page 21.

Notes:

1. If the child lock is active and the DVD disc's security rating is higher than that of the child lock, the four-digit password will need to be entered (see "Ratings" on page 23).
2. DVD's have a country code. The recorder will not play a disc that has a country code which differs from the country code stored in the unit. This player has country code 2.
3. You can also switch Play back control - PBC (see page 21) off from the main menu (OFF).

General functions

Note: Unless otherwise indicated, the remote control is able to control the functions described. The DVD recorder's own controls can also be used to control certain functions.

Selecting a different TITLE



DVD Video VR

If there is more than one title on a disc, you can switch to a different title as follows:

Press  twice and use  /  to select the title's symbol. Then press the appropriate number button (0-9) or  /  to select a title number. After pressing **OK**, the title will play.

Selecting a different CHAPTER or TRACK



DVD Video VR VCD

If a disc title has more than one chapter/track, you can select a different chapter or track as follows:

During playback, press **P+** or **P-** to go to the next chapter or next track, or to go back to the start of the current chapter or track.

Press **P-** twice to go back to the previous chapter/track.

During playback, you can select a chapter or track directly by pressing  twice. Then use  /  to select the chapter symbol (or the track symbol on a video CD). Then use the number buttons (0-9) to input the chapter/track number or use  /  to select it. When **OK** is pressed, the chapter will play.

Using DVDs and Video CDs

Searching

DVD Video VR VCD

1. Press or during playback. The recorder now switches to Search mode.
2. Press or repeatedly to select the speed you want:
 toggles between x2, x4, x8, x16, x100 (backwards) or
 x2, x4, x8, x16, x100 (forwards).
With a video CD, the search speed changes as follows: x2, x4, x8 .
3. You can leave Search mode by pressing .

Freeze-frame and Picture For Picture playback

DVD Video VR VCD

During playback, press .

The recorder now switches to PAUSE mode.

1. You can page backwards and forwards between images by pressing / repeatedly or page continuously by holding / down.
2. You can leave PAUSE mode by pressing .

Notes: Paging back through images is not supported by video CDs. You can page forward through images by pressing on the remote control.

Slow motion

DVD Video VR VCD

1. During playback, press .
2. In PAUSE mode, press or . The DVD recorder switches to Slow Motion mode.
3. Use the or button to select the speed you require by repeatedly pressing:
 1/16, 1/8, 1/4, 1/2 (backwards) or
 1/16, 1/8, 1/4, 1/2 (forwards).
With a video CD, the slow motion speed changes as follows:
 1/8, 1/4 or 1/2 (forwards).
4. You can leave Slow Motion mode by pressing .

Note: Video CDs do not support slow motion backwards playback.

Repeating



DVD Video VR VCD

DVD discs - Repeating chapter/title/OFF

Press to select the repeat mode that you want:

- Chapter: repeats the current chapter.
- Title: repeats the current title.
- All: repeats all the titles on the disc.
(VR mode - only DVD-RW discs)
- OFF: no playback repeated.

Video CDs - repeat track/all/OFF

Press to select the repeat mode that you want.

- Track: repeats the current track.
- All: repeats all the tracks on the disc.
- OFF: no playback repeated.

Note: On a video CD with PBC, you must set PBC to OFF in the „Disc“ menu of the main menu in

order to use the Repeat function. Further information can be found from page 21.

Time (Play from ...)



DVD Video VR

The “Time” function enables you to select the time that the disc begins to play.

1. During playback, press twice. The Info bar will appear on the television.
The elapsed playing time of the current disc shows in the “Time” field.
2. Use / to select the “Time” symbol.
“0:00:00” displays in the “Time” field.
3. Use the number buttons to input the required start time within 20 seconds. From left to right, input the hour, the minutes and the seconds of the disc’s start time.
You cannot input an invalid start time. If you have input incorrect figures, press / to move the cursor () to the incorrect figure. Input the correct numbers.
4. Press **OK** within 20 seconds to confirm the start time. Playback will start at the time selected.

Using DVDs and Video CDs

Zoom

DVD Video VR VCD

You can use the Zoom function to expand the video image and navigate in the enlarged image.

1. During playback or freeze-frame playback, press **RADIO** to activate the Zoom function.
Each time that you press the **RADIO** button, the screen will change as follows:
Size x1, size x2, size x4, size x1 (normal size).
2. Use the **◀ ▶ ▲ ▼** buttons to move around within the zoomed image.
3. To continue with normal playback, press **RADIO** repeatedly until the image is back to the normal size.

Note: With some DVDs, the Zoom function may not work.

Markers



DVD Video VR VCD

How to set a marker

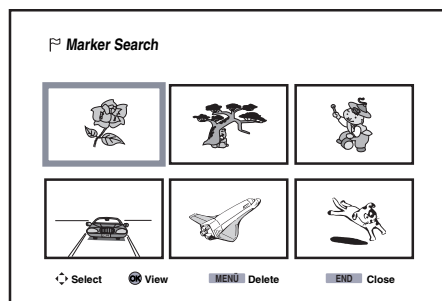
You can start playback from a marker that has been saved. Up to six markers can be saved.
How to set a marker:

1. During playback, press **⏸** when you are at the point at which you want to save a marker.
The marker symbol will appear on the screen for a short time.
2. Repeat step 1 to set up to six markers on a disc.

How to recall a scene that has been marked

1. Press **⏸** during playback. The "Marker search" menu will appear on the screen.
2. Use the **◀ ▶ ▲ ▼** buttons to select a marked scene that you wish to recall.
3. Press **OK**.
Playback will start from the marked scene.

4. Press **END** to turn off the "Marker search" menu.



How to delete a marker

1. Press **⏸** during playback or while in Stop mode.
The "Marker search" menu will appear on the screen.
2. Use the **◀ ▶ ▲ ▼** to select the marker that you wish to delete.
3. Press **MENU**.
The message "The selected marker has been deleted" will appear.
4. Use **◀ / ▶** to select the "Yes" option, and press **OK**.
5. Repeat steps 2 -4 to delete other markers.
6. Press **END** to turn off the "Marker search" menu.

Disc menus

Most DVDs have their own menus. There is a difference between the disc menu and the so-called title menu.

Title menu

DVD

1. Press **TITLE**. If the current DVD has a title menu, it will appear on the screen. Otherwise the disc menu may be shown.
2. The menu may cover camera angles, languages spoken, sub-title options and chapters for the title.

Disc menu

DVD

1. Press **TEXT**.
The disc menu is displayed.
2. Make the settings you require by using **◀ ▶ ▲ ▼** and **OK**.
3. Press **TEXT** again to close the disc menu (or it may automatically close when **OK** is pressed).

Using DVDs and Video CDs

Camera positions



DVD

If the DVD contains scenes that have been captured using different camera positions, you can switch to a different camera position during playback.

- Press  during playback and then press  /  repeatedly to select the camera angle you require.
The number of the current camera position is shown on the screen.

Note: A camera symbol will appear on the screen during scenes that were recorded using different camera positions.

Digital sound formats and film language



DVD

Here you can select the digital sound format in connection with the film language. To do this, press  2x during playback and use  /  to select the „Audio“ menu item. Then press  /  to get a different film language or sound format.

Note: Some discs have got Dolby Digital and DTS sound tracks. If DTS is selected, there is no analogue audio output. To listen to the DTS sound track, connect the recorder via one of the digital outputs to a DTS amplifier (see page 15).

Changing the audio channel



VCD Video VR

If have inserted a video CD, press  2x during playback and use  /  to select the „Audio“ menu item. Then press  /  to listen to a different audio channel (STEREO, LEFT or RIGHT).

3D surround sound



DVD Video VR VCD

This unit can produce a 3D surround sound effect that uses two ordinary stereo speakers to simulate multi-channel audio playback with the five speakers or more that are normally required for multi-channel audio in a home cinema system.

- Press  2x and use  /  to select the „Sound“ menu item. Then press  /  during playback to select „3D SUR“.
- Select „NORMAL“ to switch off the 3D surround sound effect.

Subtitles



DVD Video VR

During playback, press  2x and use  /  to select the „Subtitles“ menu item. Then press  /  to select the subtitle language on the DVD.

Using DVDs and Video CDs

Storing the last disc settings

DVD Video VR

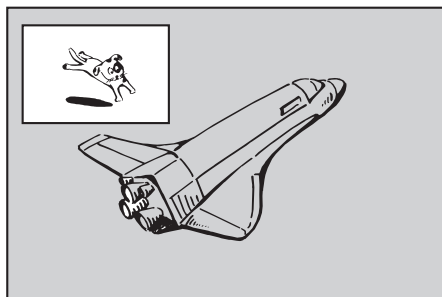
The recorder saves the user settings for the last disc that you have watched. The settings are saved until you remove the disc from the recorder or switch it off.

If you insert a disc that has already been played back, playback will continue from the last stopping point.

PIP (Picture In Picture)

DVD Video VR VCD

This function enables you, during playback, to watch television programmes or images from other connected AV sources in a small picture.



PIP on / off

Press **# PIP** to switch the small picture on. Press this button again to switch it back off.

Selecting the small picture

Press *** EPG** to select the signal source for the small picture. Each time that the button is pressed, the different signal sources for the small picture are displayed as below.

Tuner, AV1, AV2, AV3, AV4, Tuner

Selecting a TV programme for the small picture

Use **▲ / ▼** to change the programme when the small picture input is set to Tuner. The number of the programme selected appears on the screen.

You can replace the large picture with the TV programme showing in the small picture by using **■** to end the DVD playback (the small picture is then suppressed).

Changing the position of the small picture

Press **◀ / ▶** repeatedly until you reach the position you want. The small picture can be moved clockwise and counter-clockwise.

Zooming the small picture

Press **RADIO** repeatedly to increase the size of the small picture. 3 different sizes are available.

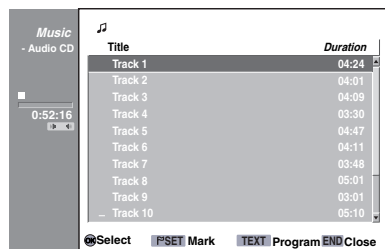
Operating the Audio CD and MP3

Playing audio CDs or MP3 discs

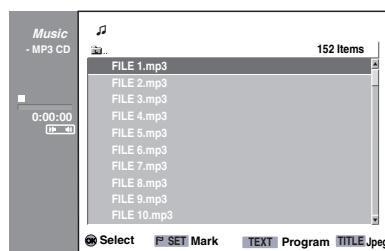
CD MP3

The DVD recorder can be used to play audio CDs. Recordings made in the MP3 format can also be played back on CD-ROM, CD-R or CD-RW discs (before playing MP3 recordings, read the advice on MP3 recordings on page 36).

1. Insert the disc and close the drawer. The "Music - Audio CD" or "Music - MP3 CD" menu appears on the screen.



AUDIO CD Menu



MP3 CD Menu

2. Use $\blacktriangle$ / $\blacktriangledown$ to select a track, and press $\blacktriangleright$. It begins to play. During playback, the amount of time that has elapsed of the current track is displayed in the left-hand window. When the disc comes to an end, playback stops automatically.

Notes:

a.) To see the channel that the DVD recorder is delivering, or the images from the AV inputs, press DVD-AV/ $\star$ EPG. Use the DISC-M/ TEXT button to return to the CD menu.

b.) You can switch between the programme list and the original list by pressing TEXT (see page 37).

Press $\blacktriangleleft$ or $\blacktriangleright$ to switch to the previous/next list page.

c.) With mixed CDs (Audio tracks, MP3 and JPEG files) you can switch between the „Audio CD“, „MP3 CD“ and „Photo CD“ menus by repeatedly pressing TITLE TEXT when in Stop mode.

3. To interrupt playback at any time, press $\blacksquare$.

Options in the Music menu

1. To display menu options, select a track (or folder) in the menu and press **OK**.
2. Use $\blacktriangle$ / $\blacktriangledown$ to select an option and then always press **OK** to execute the function.

Options in the Music-Audio CD menu

CD

Play

Program add

- **Play:** Starts playing the selected track.
- **Program add:** Adds the selected track to the programme list. (Page 37)

Options in the Music-MP3 menu

Play

Program add

Folder

Titles only

Copy

When a track is selected:

- **Play:** Starts playing the selected track.
- **Program add:** Adds the selected track to the programme list. (Page 37)
- **Folder:** Displays the disc's folder list.
- **Titles only:** Displays all the MP3 files on the disc (no folders).

When a folder is selected:

Open
Program add
Folder
Titles only
Copy

- **Open:** Opens the folder and displays its contents.
- **Program add:** Adds all the tracks in the selected folder to the programme list (see page 37).
- **Folder:** Displays the disc's folder list if "Title only" had previously been chosen to display only the tracks.
- **Titles only:** Displays all the MP3 files on the disc (no folders).

Pause

CD MP3

1. During playback, press II .
2. To continue playback, press $\blacktriangleright$ or II to replay.

Playing a different TRACK

CD MP3

- During playback, press **P-** or **P+** once to go to the next track or to go back to the start of the current track.
- Press **P-** - twice to go back to the previous track.
- With an audio CD, if you wish to play a certain title you can also input the track number directly, by pressing the number buttons (0-9).

Operating the Audio CD and MP3

Repeat

CD MP3

Press  for the Repeat type that you want.

- TRACK: repeats the current track.
- ALL (CD): repeats all the tracks on the CD.
- FOLDER (MP3): repeats all the tracks in the current folder.
- OFF: no repeat.

Search

CD

1. During playback, press  or .
The recorder now switches to Search mode.
2. Use the  or  buttons to select the Search direction and the Search speed that you want:
 x2, x4, x8 (backwards) or
 x2, x4, x8 (forwards).
The Search speed and Search direction are displayed on the screen.
3. Use  to come out of the Search mode.

Advice on MP3 recording

About MP3

- An MP3 file is made up of audio data that have been compressed using MPEG1 audio layer 3 file coding. Files with the ".mp3" extension are known as MP3 files.
- The recorder cannot read MP3 files that have an extension other than ".mp3".

The compatibility of MP3 discs and this recorder is subject to the following restrictions:

1. The physical format of the CD-R should conform to ISO 9660 and JOLIET.
2. If you record MP3 files with software such as "Direct CD", which cannot create a FILE SYSTEM, you cannot play back MP3 files.
3. The total number of files and folders on the disc should be no more than 999.

To achieve the best possible playback quality, the discs and recordings that are played on the DVD recorder should meet certain technical standards. DVDs that have already been played meet these standards. With writable disc formats, there are many different types (e.g. a CD-R with MP3 files) that have to meet certain conditions (see above) if compatibility is to be assured when playing.

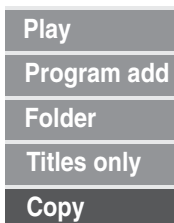
It should also be noted that permission is required to download MP3 files and music from the Internet. Our company is not authorised to issue such permission. The permission required should always be sought from the copyright holder.

Copying files / folders from a CD to an audio/photo card

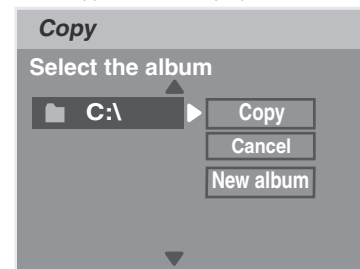
MP3 and photo files can be copied from a CD to a memory card in the audio/photo card reader. This can be used, for example, to play files on portable playback devices (such as MP3 players).

Note: You should be sure to switch off any write protection on the memory card and check that there is sufficient storage space on the card.

1. Use  /  to select a file / a folder on the CD and then press **OK**. In the menu that appears, use  /  to select "Copy" and then press



2. The "Copy" menu is displayed.

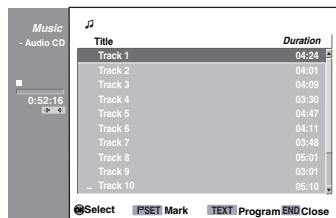


3. Use  /  to select the folder on the memory card that will receive the copy, and then press .
4. Select "Copy" and press **OK**. The selected files / folders are copied to the selected folder on the memory card.
Use "Cancel" to return to the starting menu.
"New folder" can be used to create a new folder on the memory card. You can then copy the selected files / folders to it.

Programmed replay with audio CD and MP3

You can use the Program function to combine your favourite items from a disc or memory card in the order you want and thus create a personalised program. The memory will hold either 99 tracks (audio CD) or 256 tracks (MP3).

1. Insert an audio CD or an MP3 disc or a memory card. The "Audio CD" or "MP3 CD" / "MP3 card" menu will display.
2. Use ▲ / ▼ to select a track (or folder). To select more than one track or folder at once: a.) Press . The track/folder will be marked (✓). By pressing again, you can delete the mark. b.) Repeat step a) for other tracks (folders).
3. Press **OK**. The options are displayed in the left half of the menu.
4. Use ▲ / ▼ to select the "Program add" option and then press **OK** to transfer the selected items to the programme list.
Note: When a folder is added to the programme list, only the tracks in this folder will be copied - not those in any sub-folders.
5. To add more tracks to the programme list, repeat steps 2-4.
6. When you have finished creating the programme list, press to display this in the "Programme list" menu (the button switches between the programme list and the original list).



7. Use ▲ / ▼ to select the programme track that is to be the first one to be played.
Note: With programme lists of more than one page, you can use or to page backwards and forwards.
8. Press .

The tracks are played back in the order that has been programmed. Playback stops after the last track in the programme has played.

Options in the Programme list menu CD MP3

1. To display the menu options for any item in the programme list, select a track in the "Programme list" menu and press **OK**. The options are displayed in the left half of the menu.
2. Use ▲ / ▼ to select an option, and press **OK** to confirm.

Play
Move
Delete
Delete all
Copy

- **Play:** Playback begins with the selected track in the programmed order.
- **Move:** Moves the selected track(s) and changes the order.
- **Delete:** Deletes tracks from the programme list.
- **Delete all:** Deletes all the tracks from the programme list.
- **Copy (only MP3 list):** Copies the selected tracks/folders to the memory card.

Repeat programmed tracks

During playback, press repeatedly to select a Repeat type.

- **TRACK:** repeats the current track.
- **ALL (only CD):** repeats all the programmed tracks on the CD.
- **FOLDER (only MP3):** repeats all the tracks in the current folder.
- **OFF:** no repeat.

Deleting tracks from the programme list

1. Select the programme list track that is to be deleted.
Note: You can use the button to select more than one track.
2. Press **OK**. The options are displayed in the left half of the menu.
3. Select "Delete" and press **OK**. The selected track is removed from the programme list.
Note: Select "Delete all" to remove all the tracks.

Changing the track order in the programme list

1. Select the track that you wish to move.
Note: You can use the button to select more than one track.
2. Press **OK**. The options are displayed in the left half of the menu.
3. Select "**Move**" and press **OK**. A blue deletion line appears in the programme list.
4. Use ▲ / ▼ to move the blue deletion line to the appropriate place, and press **OK**. The selected track is moved.

Saving programme lists

MP3

This recorder automatically saves the programmed user list for the disc. The programme list remains in memory, even when the disc is taken out or the recorder is switched off.

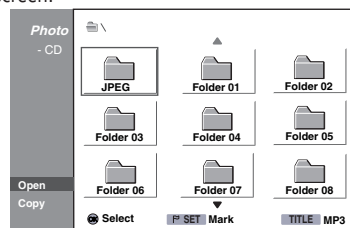
Using the photo disc

Playing a photo disc

JPEG

The recorder can be used to play discs with JPEG files. Before playback, read the "Notes on JPEG files" on the right.

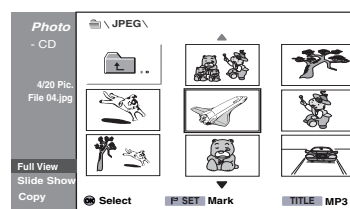
1. Insert the disc and close the drawer.
The photo menu (overview) will appear on the screen.



2. Use $\uparrow$ $\downarrow$ $\leftarrow$ $\rightarrow$ to select a folder, and then press **OK**. The left half of the menu displays the options that you can use on the selected item. Select a JPEG file and press **OK**, then continue from Point 6.

Note: If the ? symbol appears in the photo menu, these JPEG files cannot be displayed.

3. Use $\uparrow$ $\downarrow$ $\leftarrow$ $\rightarrow$ to select the "Open" option, and press **OK**.
4. The contents of the selected folder are displayed.



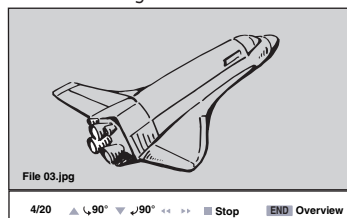
5. The options are displayed in the left half of the menu.

Notes:

a.) To go back from the file list to the folder above, press $\uparrow$ / $\downarrow$ on the remote control to mark the ? symbol, and press **OK**.

b.) To see the television programme that the DVD recorder is transmitting, or the images from the devices attached to the AV inputs, press ★ EPG .
Use the TEXT button to go back to the menu.
c.) Press ◀ or ▶ in the photo menu to switch to the previous or next page.
d.) With mixed CDs (audio tracks, MP3 and JPEG files), when you are in Stop mode you can switch between the AUDIO CD, MP3 CD and Photo CD menus by repeatedly pressing **TITLE**.

6. Use $\uparrow$ / $\downarrow$ to select the "Full View" option, and press **OK**. Information and user guidance regarding the current image is displayed in the lower part of the screen. You can toggle this bar on and off using **OK**.



7. Return to the overview using ■ .

Accessing images one by one

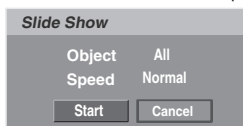
In the full display, press ▶ / ◀ once to display the next or previous file.

Rotating images

Press $\uparrow$ / $\downarrow$ to rotate an image that is being displayed 90° clockwise or anti-clockwise.

Slide show

1. Select "Slide show" in the photo menu.



2. Press **OK**.
The "Slide show" menu is displayed.
3. Use $\uparrow$ $\downarrow$ $\leftarrow$ $\rightarrow$ to select the options.
Item: display selected files or all files (see note

below). Speed: To set the slide show speed (Slow, Normal or Fast).

4. Select "Start" and press **OK** to begin the slide show.
5. Press ■ to stop the slide show and go back to the photo menu.

Note: You can use the ○ button to select single files and make them into a slide show.

Notes about JPEG files

Depending on the size and number of JPEG files, it can take several minutes to read the disc. If nothing appears on the screen after a few minutes, some files are too large. Reduce the resolution of the JPEG files to less than 4 Megapixels and burn the disc again.

There is no limit on the total number of files and folders, but the total number of files in the folder has to be fewer than 999.

Due to different recording formats or the condition of the CD, some discs may be incompatible.

When using burning software to burn JPEG files onto a CD-R, all the selected files must have the ".jpg" or ".jpeg" extension before they will be burned onto the CD.

If the files have the ".jpe" extension, they must be renamed to ".jpg" or ".jpeg".

This recorder cannot read file names without the ".jpg" or ".jpeg" extension, even if the files appear as JPEG images in Windows Explorer.

Using the audio/photocard reader

Overview

About the system

You can use the digital audio/photo card reader built into the DVD recorder to display on the screen images from digital cameras with the most common memory cards.

MP3 audio files can also be played. You can create and play a programme list consisting of a selection of MP3 titles.

You use the Loewe DVD recorder's remote control to operate the audio/photo card reader.

When the memory card is inserted, you can use the **CARD** button to switch to using the audio/photo card reader. An overview will appear of the images or MP3 files stored on the card - depending on the last method of use.

If there are over 9 images stored, you can use **▶▶** or **◀◀** to go to other pages of the overview.

You can manually mark and view an image, and switch to the next or previous image.

You can rotate images that were taken in portrait mode, or that need to be turned upside-down.

The Slide show function can be used to automatically move on to the next image. You can use the menu to specify how quickly the images should be changed (see page 41).

MP3 or JPEG files can be copied from a data CD to a memory card with enough free storage space, so that they can be played on, e.g., portable playback devices (see page 37).

Data/memory card compatibility

The images stored on the card must be in the JPEG baseline DCF format. Other formats will not be displayed and are identified in the overview by a question mark. There is a maximum of 8 Megapixels. For further details about JPEG files, refer to page 38.

MP3 files are played at 32 - 320 kBps bit rates and at variable bit rates.

If the memory card is formatted on a PC or Mac, to then save a series of pictures on the card, it must be formatted in FAT 12, 16 or 32. Memory cards with other formats cannot be read.

Memory card capacity

Memory Stick (MS)	16MB ... 1 GB
MultiMediaCard (MMC)	32MB ... 256 MB
Secure Digital (SD)	32MB ... 256 MB

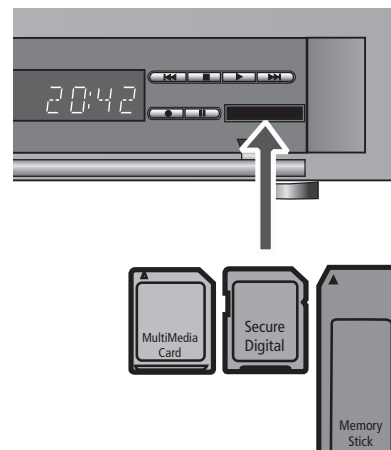
Tested memory cards *

MS cards	Capacity
Sony	16MB - 1GB
SD cards	Capacity
Apacer	128 - 256MB
Panasonic	32MB
Lexar	128
Kingston	128MB
Toshiba	128 - 256MB
Transcend	32 - 64MB
MMC cards	Capacity
Pretec	64MB
Kodak	64 - 128MB
Apacer	32MB

*** Playback cannot be guaranteed with memory cards that have not been tested.**

Inserting/removing memory cards

It is recommended that memory cards are only inserted and removed when the unit is switched off.



Inserting a memory card: Push the card in until it snaps into place.

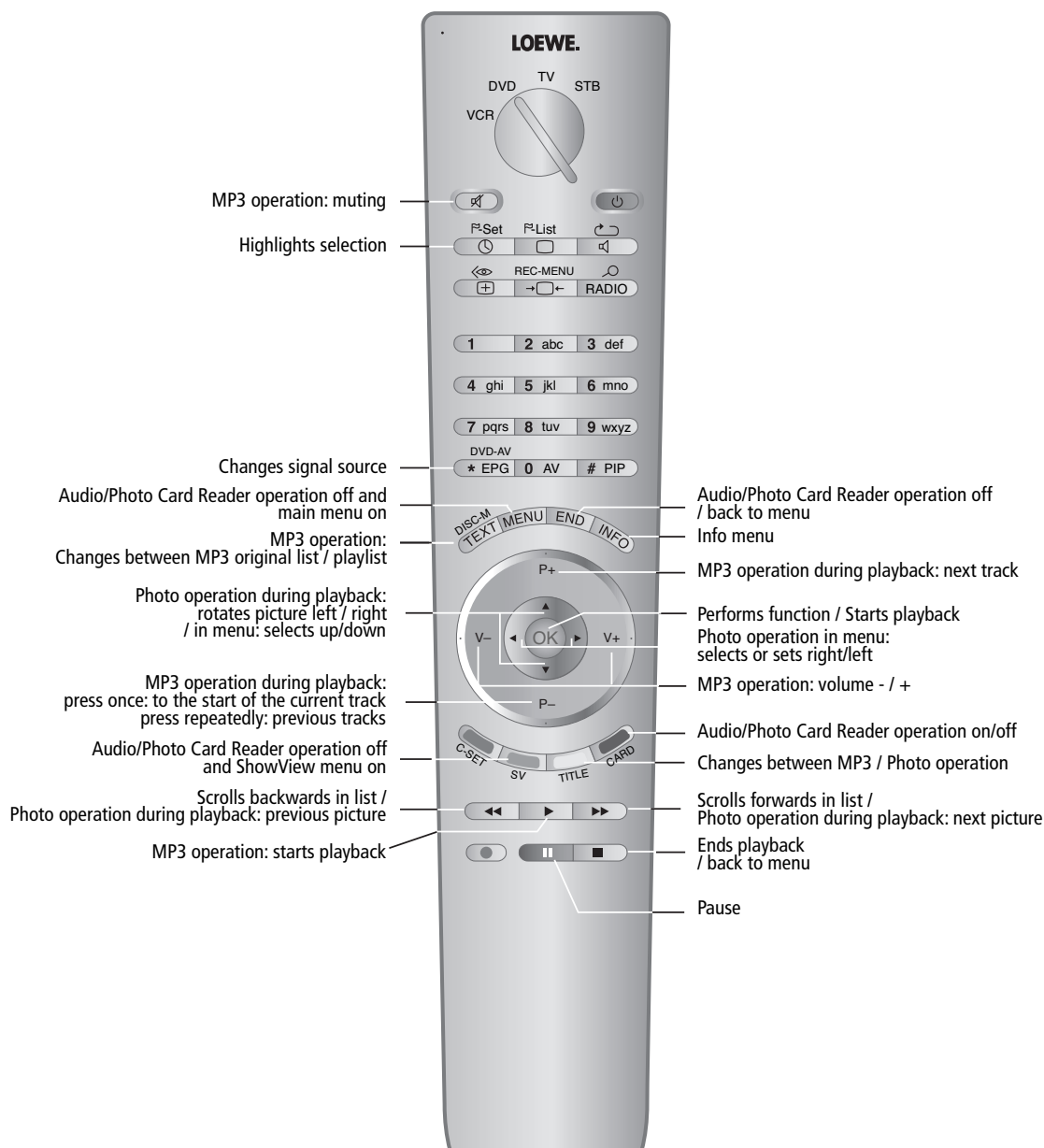
Removing a memory card: Press gently on the middle of the front of the card until it disengages, and then carefully withdraw the card.

Notes:

- When activating the audio/photo card reader, the DVD recorder should be idle, with no additional screen displays (no menu or Picture In Picture display).
- Take care with the card's polarity / tag (see diagram above).
- Keep memory cards out of reach of children. If swallowed, a doctor is required immediately.
- Cards should not be touched with electrical contacts, or the memory may be damaged.

Using the audio/photocard reader

RC3 remote control audio/photo card reader functions

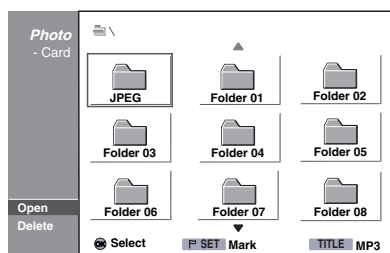


Using the audio/photocard reader

Using photo

Displaying image files

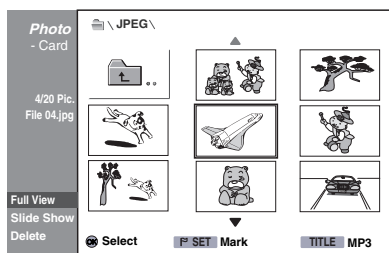
1. Press the **CARD** button and the "Photo card" mode will display. The photo menu appears on the screen.



2. Use **▲ ▼ ◀ ▶** to select a folder, and then press **OK**. The left half of the menu displays the options that you can use on the selected item. Select a JPEG file and press **OK**, then continue from Point 6.

Note: If the **?** symbol appears in the photo menu, these JPEG files cannot be displayed.

3. Use **▲ ▼ ◀ ▶** to select the "Open" option, and press **OK**.
4. The contents of the selected folder are displayed.



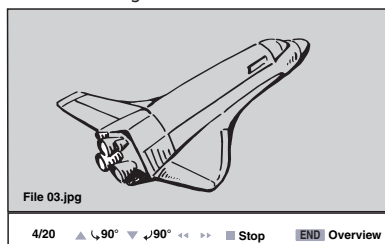
5. The options are displayed in the left half of the menu.

Notes:

a.) To go back from the file list to the folder above, press **▲ / ▼** on the remote control to mark the **⏮** symbol, and press **OK**.
 b.) To see the television programme that the DVD recorder is transmitting, or the images from the devices attached to the AV inputs, press **DVD-AV/** **★ EPG**. Use the **DISC-M/** **TEXT** button to go back to the menu.

c.) Press **◀▶** or **▶▶** in the photo menu to switch to the previous or next page.
 d.) With mixed CDs (audio tracks, MP3 and JPEG files), when you are in Stop mode you can switch between the "Music MP3 card" and "Photo card" menus by repeatedly pressing **TITLE**.

6. Use **▲ / ▼** to select the "Full view" option, and press **OK**. Information and user guidance regarding the current image is displayed in the lower part of the screen. You can toggle this bar on and off using **OK**.



7. Return to the overview using **■**.

Note: To go to the folder above, use **▲ ▼** to mark **⏮**, and press **OK**.

Accessing images one by one

In the full display, press **▶▶** / **◀◀** once to display the next or previous file.

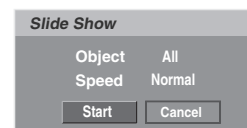
Rotating images

Press **▲ / ▼** to rotate an image that is being displayed 90° clockwise or anti-clockwise.

Slide show

1. Select "Slide show" in the photo menu.

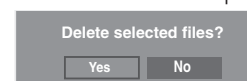
2. Press **OK**. The "Slide show" menu is displayed.



3. Use **▲ ▼ ◀ ▶** to select the options. Item: display selected files or all files. Speed: To set the slide show speed (Slow, Normal or Fast).
4. Select "Start" and press **OK** to begin the slide show.
5. Press **■** to stop the slide show and go back to the photo menu.
6. Note: You can use the **⌚** button to select single files and make them into a slide show.

Deleting images or folders

1. Use **▲ ▼ ◀ ▶** to select the folder or file that is to be deleted. To delete more than one folder/file, first use the **⌚** button to mark them.
2. Press **OK** and select "Delete" from the photo menu. The "Delete" menu is displayed.



3. Select "Yes" if you want to permanently delete the selected folders/files, and press **OK**. The delete procedure on the memory card cannot be reversed.

Note: You may need to ensure that, if the memory card is write-protected, this is removed in advance.

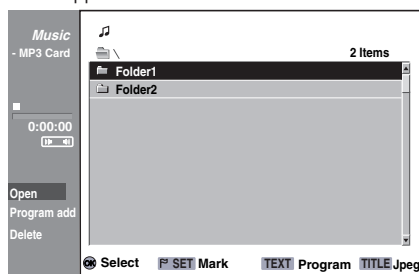
Using the audio/photocard reader

Using MP3

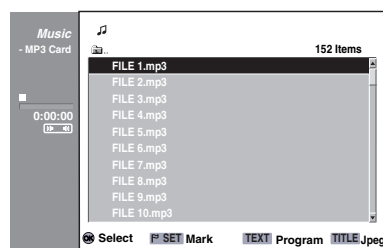
Playing MP3 files

Before playing MP3 recordings, read the notes regarding MP3 recordings on page 36.

1. Insert the memory card. Press the **CARD** button. The "Music-MP3 card" or "Photo-card" modes appear. In the latter case, press the **TITLE** button so that the "Music-MP3 card" menu appears on the screen.



2. Use **▲ ▼ ◀ ▶** to select a folder or file, and press **OK**. The menu options are displayed on the left. If you have selected a folder and pressed **OK**, select the "Open" option from the menu and press **OK**.



3. Use **▲ / ▼** to select a file and press **▶** or press **OK**, then select "Play" from the menu options that appear, and press **OK** again. Playback begins. During playback, the amount of time that has elapsed of the current track is displayed in the menu. When the list comes to an end, playback will stop. You can press **DISC-M/TITLE** to toggle between the original list and the programme list.

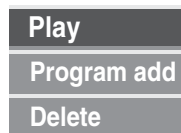
Press **◀▶** or **▶▶** in the "Music-MP3 card" menu to switch to the previous/next page. When the memory card has mixed content (MP3 and JPEG files), you can press **TITLE** when in Stop mode to toggle between the "Music-MP3 card" and "Photo-card" menus.

4. To interrupt playback at any time, press **■**.

Options in the Music menu

1. To display menu options, select a track (or folder) in the menu and press **OK**.
2. Use **▲ / ▼** to select an option, and press **OK** to confirm.

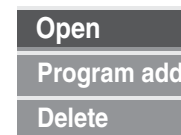
Options in the Music MP3 card menu



When a track is selected:

- **Play**: Starts playing the selected track.
- **Program add**: Adds tracks to the programme list. (page 37)
- **Delete**: Deletes the selected track.

When a folder is selected:



- **Open**: Displays a subfolder and all MP3 files in this folder.
- **Program add**: Adds all the tracks in the folder to the list. (see page 37)
- **Delete**: Deletes the selected folder.

Note: Only empty folders can be deleted.

Pause

1. During playback, press **||**.
2. To continue playback, press **▶** or again **||**.

Playing a different TRACK

- During playback, press **P-** or **P+** once to go to the next track or to go back to the start of the current track.
- Press **P-** twice to go back to the previous track.

Repeating

Press **◀▶** for the Repeat type that you want.

- **TRACK**: repeats the current track.
- **FOLDER**: repeats all the tracks in the current folder.
- **OFF**: no repeat.

Recording - first steps

Manual recording

Proceed as follows to record television programmes.

Recording will start immediately and will continue until the disc is full or you stop the recording.

1. Switch the recorder on and insert a writable disc. Using the **DVD-AV/TEXT** button, switch the recorder input to the signal source that you wish to record from. If you insert an empty disc, it is first initialised automatically by the recorder (see page 25).
2. Set the recording quality (see page 24).
3. If you wish to record a TV programme, use the **P+ / P-** buttons to select a television programme or a signal source (e.g. AV1). The programme number, name and the current sound status are displayed on the screen.
 - For dual-language TV recordings, select the sound channel in the "Record → TV rec audio" submenu in the main menu (see page 25).
 - This recorder can also record NICAM audio. If the NICAM setting (see page 20) is set to Auto, audio will be automatically changed to NICAM whenever a NICAM programme is broadcast. If poor reception distorts the NICAM sound, you can switch off the programme's NICAM setting.
4. Press  once. Recording will begin. (The red **REC** display comes on in the DVD recorder's display window.)
5. Recording will go on until you press  or until the disc is full. You can find out about specifying the length of the recording under "Immediate Timer Recording".

Stopping the recording

1. Press  to stop the disc during a recording.
2. If you wish to continue the recording, press .

Immediate Timer Recording

The "Immediate Timer Recording" enables you to make a recording with a specified length without using the programme timer.

1. Follow steps 1-4 (see "Manual recording").
2. Press  several times to set the duration of the recording. Recording will begin after the first press of the button. Each additional press of the button extends the length of the recording by 10 minutes. When the set time elapses, the DVD recorder will stop recording. It then automatically switches off.



"Immediate Timer Recording" menu

Checking the recording time

Press  once to check the recording time. The length of recording time that remains will display. When the button is pressed again, while the display is still visible, "Continue" will display instead of the length of recording time that remains.

Extending the recording time

You can extend the recording time whenever you wish by pressing  while "Continue" is displayed.

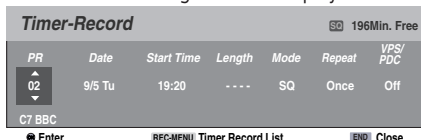
Each time that  is pressed, the recording will extend by 10 minutes, and the new recording time will be displayed instead of "Continue".

Caution: If the recorder is cut off from the power supply while it is recording (or if there is a power cut), the recording will be lost.

Timer recording

This DVD recorder can be programmed so that it can make up to seven recordings in a month. For recording with nobody in attendance, the timer has to know which signal sources (TV stations or from AV devices) should be recorded, and it needs the start time and the inputs which define the recording length.

1. Insert a writable disc and press . The "Timer Recording" menu is displayed.



- PR – Select a stored programme number or one of the external inputs for the recording.
- Date – Select a date that lies, at most, one month from the current date.
- Start Time – Sets the recording's start time (see Notes).
- Length – Sets the duration of the recording.
- Mode – Select a recording quality (HQ, SQ, LQ, EQ, or AT).
The AT (Auto) mode establishes how much disc time is available and, if necessary, switches to the recording quality to stop recording the programme (see page 24 for the other modes).
- Repeat – Select the repeat type that you require (once, daily (Monday - Friday) or weekly).
- VPS/PDC – The VPS/PDC system automatically alters the recording time so that you do not miss the programme if the programme schedule has been changed. For VPS/PDC to work properly, you need to key in the VPS time (which may differ from the actual time of day - see the Notes below) and the date of the programme that you wish to record.

Notes:

- You should be aware that not all stations work with VPS.
- Stations that use VPS/PDC usually have VPS/PDC information on their teletext pages. Look for information on those pages when you are going to make a timer recording.
- It takes around 30 seconds for the recorder to tune in and for recording to begin. If you are using VPS/PDC, the first few seconds of the programme may not be recorded.
- The actual time of day and the actual date will have to be keyed into the DVD recorder (see page 20).

2. Input the information needed for your timer recording(s).

- / (left/right) – select the input fields
- / (up/down) – changes the setting in the active input field.

The other options in this menu are:

- **OK** - saves your inputs in the timer (see point 3).
- **END** - closes the menu and discards the inputs.
- - opens the timer recording list.

3. When you press **OK** the DVD recorder saves the programmed recording and displays the timer recording list.

Check in the "Status" column that the timer recording has been programmed correctly and a playable disc has been inserted.

4. Press **END** to close the timer recording list.
5. Press to switch the unit to standby.

Notes:

- The timer's LED lights up in the unit's display window when the recorder is in standby mode and at least one timer recording has been programmed.
- For dual-language TV recordings, select the sound channel in the "Record → TV rec audio" submenu in the main menu (see page 25).
- To stop a timer recording that is underway, press the button.
- The recording's start time must be at least 3 minutes into the future!

Timer recordings with the ShowView ® system

Programming timer recordings with this system is child's play. Most television schedule publications include the SHOWVIEW code numbers along with the information about the programmes. So when you want to make a timer recording of a programme, you only need to key in the appropriate SHOWVIEW code number. The date, start time, end time and station are set automatically. You only need to set the recording quality and specify whether it is to be a one-off or repeated recording. You can save up to seven timer programmes on the recorder.

1. Press the green key **SV**.
The "Showview" menu is displayed.



To close the menu, press **SV** again.
Input fields

- Number – key in the SHOWVIEW code number.
- Repeat – select the repeat type that you require (once, daily or weekly).

2. Use the number buttons to input the SHOWVIEW code number.
 - ◀ / ▶ (left/right) – select the input fields.
 - If you make a wrong input, press repeatedly **MENU** before you press **OK** to delete the numbers one by one and then correct the password. You can also use ◀ / ▶ to go straight to the input field that you wish to correct and then overwrite the numbers that are there by using 0-9.
3. Use ◀ / ▶ to place the cursor in the "Repeat" column. Use ▲ / ▼ to select the "Repeat" option (once, daily [Monday - Friday] or weekly).
4. When you have input all the programme's details, press **OK**.
The "Timer recording" menu will appear. The settings can be altered from here.
5. Carry out steps 3-5 on the previous page (Timer recording).

Checking/changing the timer recording details

You can check the programming when the DVD recorder is switched on. Press **→◀** twice. The "Timer recording list" menu is displayed.

Timer Record List						
PR	Date	Start Time	Length	Mode	VPS/PGC	Check
5	10/4 Di	19:20	30M	LQ	Off	Rec. OK
5	10/4 Di	20:15	45M	HQ	Off	Rec. OK

Edit
 MENU Delete
 REC-MENU Timer Record
 END Close

Edit a timer program

- Use ▲ / ▼ to select a timer recording that you wish to check.
- Press **OK** to go to the selected program.
- Press **→◀** to open the "Timer recording" menu, where you can make the change.

Deleting a timer program

You can delete a timer program at any time before recording starts.

Use ▲ / ▼ to select the entry in the timer recording list that you want to delete. If you wish to delete the recording, press **MENU**.

Cancelling a timer recording

After a timer recording has begun, you can cancel it at any time by pressing **⏻**.

Conditions that will prevent recording

When the timer has been programmed, the recorder will not record under the following circumstances:

- No disc has been inserted.
- A non-writable disc has been inserted.
- "Disc protection" is switched on in the main menu (see page 27).

- There is no electric current.
- 99 titles have already been recorded on the disc.
- The recording start time is less than 3 minutes from the time it was programmed.

You cannot program the timer under the following circumstances:

- A recording is already in progress.
- The start time required is in the past.
- Seven timer recordings have already been programmed.

Multiple overlapping timer programs:

- The earlier recording takes priority.
- When the earlier recording ends, the later one will start.
- When two recordings begin at the same time, the first to be input takes priority.

If the disc is damaged, it is possible that the recording will not be done properly. Even if the "Recording OK" message appears in the "Status" field, this is not necessarily true in this case.

Recording from external sources

Recording from external components

You can record from an external source, e.g. a camcorder or video recorder connected to one of the recorder's external inputs.

1. The component that you wish to record from must be properly connected to the DVD recorder. Further information can be found on Page 16.
2. Press DVD-AV/  several times to select the external input which is to be used to make the recording.
 - Tuner: integrated tuner
 - AV1: EURO AV1 AUDIO VIDEO to the rear of the housing
 - AV2: EURO AV2 DECODER to the rear of the housing
 - AV3: AUDIO AV IN 3 / VIDEO IN 3 to the rear of the housing
 - AV4: AUDIO IN 4 / VIDEO IN 4 / S-Video IN to the front of the housing
 - DV: DV IN to the front of the housing.
3. Insert a writable disc. If you insert an empty disc, it is first initialised automatically by the recorder (see page 24).
4. Set the recording quality (see page 24).
5. Press  once.

Recording begins (the red REC comes on in the unit's display window).
Recording will go on until you press  or until the disc is full.
You can find out about specifying the length of the recording under "Immediate Timer Recording" on page 43.
6. To stop the recording press .

Note: If your source is copy-protected by Copy-Guard, you cannot use this recorder to record from it. Read the copyright notes on page 12.

General "DV" information

With DV (Digital Video, also known as i.LINK), you can use a DV cable as the audio, video, data and control signals input / output to connect a camcorder that has DV to this recorder. The i.LINK interface complies with the IEEE 1394-1995 standard.

"i.LINK" and the "i.LINK" logo are trademarks.

- This recorder is only compatible with DV-format (DV-25) camcorders. Digital satellite tuners and digital VHS video recorders are not compatible.
- You cannot connect more than one DV camcorder at a time to this recorder.
- You cannot control this recorder with external devices that are connected via the DV IN socket (incl. two DVD recorders).
- The camcorder connected via the DV IN socket cannot necessarily, in every case, be controlled.
- Digital camcorders can usually record audio as 16 bit/48 kHz stereo or twin stereo tracks with 12 bit/32 kHz. This recorder can only record one stereo audio track. Set "Record → DV sound" as required or Audio 1 or Audio 2 (see page 25).
- The sampling rate of the digital sound input to the DV IN socket must be either 32 or 48 kHz (not 44.1 kHz).
- Recording may suffer from interference if the camcorder stops playing back, if a part of the tape that has not been recorded on is played back, if the electricity supply to the camcorder is cut off, or if the DV cable comes out.
- When "Record DV sound" is set to "Audio 2" and there is no Audio 2 signal, "Record → DV sound" will automatically be set to "Audio 1".

DV messages

When you are using the DV IN socket, the following messages may appear on the screen.

Not connected to camcorder

The camcorder is not properly connected, or the camcorder is switched off.

Too many devices connected

This recorder's DV socket only supports the connection of one camcorder.

Check tape

There is no tape in the device that is connected.

Incompatible device

The recorder is unable to control the camcorder.

Information is being reloaded

The camcorder is updating data for DV.

Camera mode

The camcorder is set to camera mode.

Troubleshooting

If you are not receiving images and/or sound via the DV IN socket, check the following:
The DV cable must be properly connected.
Switch off the camcorder that is connected, and switch it back on.
Tune the audio input in to the DVD recorder.

Note: This DVD recorder cannot necessarily control every camcorder that is connected to it.

Recording from external sources

Recording from a digital camcorder

You can record from a camcorder that is connected to the DV IN socket in the recorder's front panel. You can use the recorder's remote to control a camcorder and the recorder. Before recording, make sure that the audio input has been set up for the DV IN socket (see page 25).

Notes:

- The source signal must be in the DV-25 format.
- The DVD recorder cannot control all camcorders.
- If you use a DV cable to connect a second DVD recorder, you cannot use the first device to control the second DVD recorder.
- You cannot use a device that is connected to the DV IN socket to control the DVD recorder remotely.
- You cannot record the date and time information from a DV cassette.

1. The digital camcorder must be connected to the DV IN socket at the front of the housing. Further information can be found on Page 16.
2. Check that the DV audio input fulfils the necessary conditions.
You can choose from between Audio 1 (original audio) and Audio 2 (overdubbed audio).
The DV input is set using the "Record → DV sound" submenu of the main menu (see page 25).
3. Press DVD-AV/ repeatedly to select the DV input.
"DV" appears in the DVD recorder's display window and on the screen.
4. Look for the point on the camcorder tape that you wish to record from.
For the best results, you should stop the playback at the point that you wish to record from. Depending on the camcorder, you can use the Stop, PLAY and PAUSE functions on the DVD recorder.
5. Press  once to start the recording.
 - The recording is automatically stopped if the

- DVD recorder fails to recognise a signal.
- You can pause or stop the recording by pressing  or . You cannot use the DVD recorder to control the camcorder while recording is in progress.
- In Video mode, the last frame of the recording is shown on the screen for a short time after recording has ended.
- For timer recordings to work properly on this recorder, the digital camcorder should be switched on and operational.

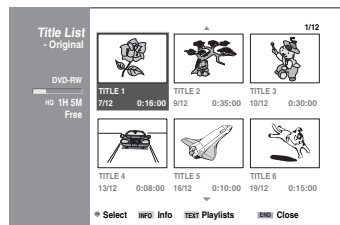
Title List and Chapter List (VR)

The "Title List-Original" Menu VR

The playlist (see page 49) is created and edited in the "Title List-Original" menu, titles can be deleted and other changes can be made to the original content of the disc. Different playlists (dependent on the program with an audio CD) can be created and edited.

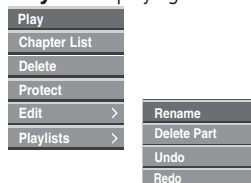
The individual titles can be played directly from the menu. The unit must be in stop mode in order to edit a title in this menu.

1. Press DISC-M/ **TEXT** to call up the "Title List-Original" menu.
With more than 6 titles use **▲** / **▼** to display the previous/next page.
Press **END** to quit the "Title List-Original" menu.



2. To display the Title List-Original options, select the desired title and press **OK**.
The options are displayed on the left side of the menu.
Use **▲** / **▼** to select an option, and press **OK** to confirm

- **Play:** Starts playing the selected title.



- **Chapter List:** Changes to the "Chapter List-Original List" for the selected title.
- **Delete:** Deletes the selected title (see page 50).

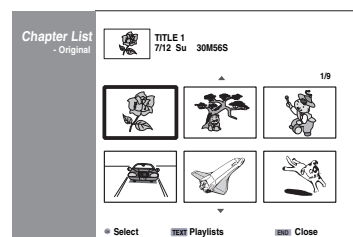
- **Protect:** Prevents inadvertent changing or deleting of a title (see page 57).
- **Edit:** Contains the following editing options:
 - * **Rename:** Edits the title name.
 - * **Delete part:** Deletes a part of the title.
 - * **Undo:** Undoes the last deletion (see page 55).
 - * **Redo:** Redoes the undo action (see page 55).
- **Playlists:** Adds the selected title to the end of a playlist of your choice.

3. Press **END** repeatedly to quit the "Title List-Original" menu.

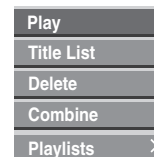
Note: Press **INFO** to display more detailed information about the selected title.

The "Chapter List-Original" Menu VR

1. Press DISC-M/ **TEXT** to call up the "Title List-Original" menu.
2. Use **▲** **▼** **◀** **▶** to select the title for which you want to display the corresponding chapter list and press **OK**.
The options are displayed on the left side of the menu.
3. Use **▲** / **▼** to select the "Chapter List" option, and press **OK**.
The "Chapter List-Original" menu is displayed on the screen.



4. To display the "Chapter List-Original" menu options, select the desired chapter and press **OK**.
The options are displayed on the left side of the menu.
5. Use **▲** / **▼** to select an option, and press **OK** to confirm.



- **Play:** Starts playing the selected chapter.
- **Title list:** Changes to the "Title List-Original" menu (see left side of this page).
- **Delete:** Deletes the selected chapter (see page 54).
- **Combine:** Combines two chapters into one (see page 56).
- **Playlists:** Adds the selected chapter to the end of a playlist of your choice (see page 53).

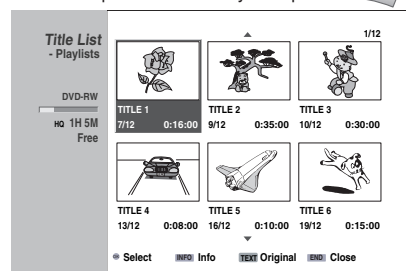
6. Press **END** repeatedly to quit the "Chapter List-Original" menu.

Title List and Chapter List (VR)

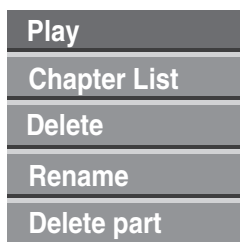
The "Title List-Playlists" Menu VR

A playlist is list of any titles and chapters.

1. Press DISC-M/ **TEXT** twice to call up the "Title List-Playlists" menu.
 - With more than 6 titles use ▲ / ▼ to display the previous/next page.
 - To quit Title List-Playlists, press **END**.



2. To display the options, select the desired title and press **OK**.
The options are displayed on the left side of the menu.
3. Use ▲ / ▼ to select an option, and press **OK** to confirm.



- **Play:** Starts playing the selected playlist.
- **Chapter list:** Changes to the "Chapter List-Playlists" for the selected title.
- **Delete:** Deletes the selected playlist (see page 54).
- **Rename:** Enables renaming of the selected playlist (see page 56).
- **Delete part:** Deletes a part of the selected playlist (see page 55).

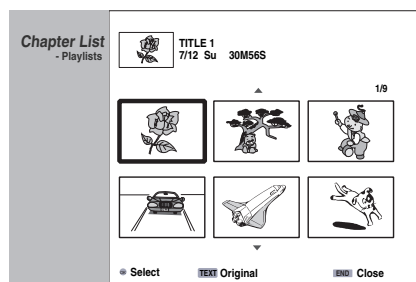
Press **END** repeatedly to quit the "Title List-Playlists" menu..

Note:

Press **INFO** to display more detailed information about the selected playlist.

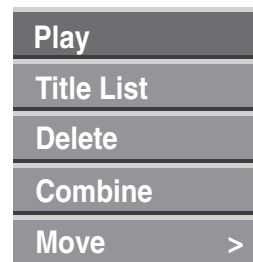
The "Chapter List-Playlists" Menu VR

1. Press DISC-M/ **TEXT** twice to call up the "Title List-Playlists" menu.
2. Use ▲ ▼ ◀ ▶ to select the title (playlist) for which you want to display the corresponding chapter playlist and press **OK**.
The options are displayed on the left side of the menu.
3. Use ▲ / ▼ to select the "Chapter List" option, and press **OK**.
The "Chapter List-Playlists" menu is displayed on the screen.



4. To display the options, select the desired chapter and press **OK**.
The options are displayed on the left side of the menu.
5. Use ▲ / ▼ to select an option, and press **OK** to confirm.
 - **Play:** Starts playing the selected chapter.
 - **Title list:** Changes to the "Title List-Playlists" menu.
 - **Delete:** Deletes the selected chapter from the playlist (see page 54).

- **Combine:** Combines two chapters into one (see page 56).
- **Move:** Moves the selected chapter to another desired position in the playlist (see page 56).



6. Press **END** repeatedly to quit the "Chapter List-Playlists" menu.

Title List and Chapter List (Video)

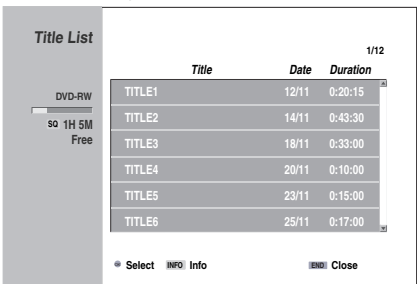
The "Title List" Menu

Video

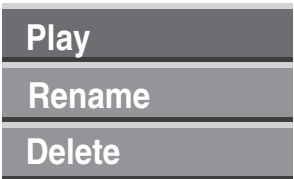
All recorded titles are listed in the "Title List" menu. Titles can also be played, renamed and deleted here.

Once a disc has been finalized in Video mode the functionality is limited and you can only play titles.

1. Press DISC-M/  to display the Title List.



2. Use  /  to select a title, and press **OK**.
The options are displayed on the left side of the menu.
3. Use  /  to select an option, and press **OK** to confirm.



- **Play**: Starts playing the selected title.
- **Rename**: Edits the title name. (page 56)
- **Delete**: Deletes the selected title from the title list.

4. Press  repeatedly to quit the "Title List" menu.

Note: Press  to display more detailed information about the selected title.

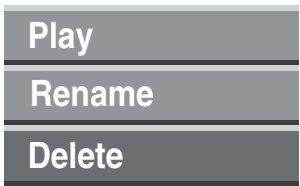
Deleting a Title

Before finalizing a disc you can delete titles recorded on the disc.

Caution:

- If you delete a title from a DVD-R disc, the title is hidden from the Title List but the available recording time does not increase.
- If you delete a title from a DVD-RW disc, the remaining recording time will only increase if the title is the last one on the disc. In this case it is actually deleted, in other cases it is simply hidden.

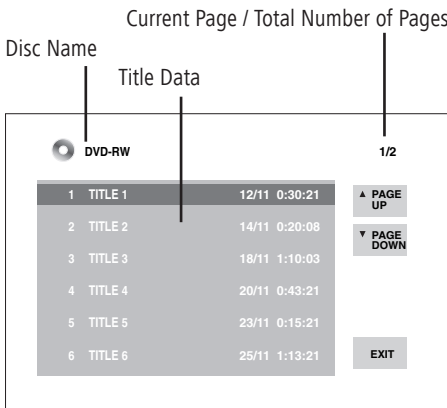
1. Press DISC-M/  to display the title list.
2. Use     to select the title you want to delete and press **OK**.
The options are displayed on the left side of the menu.
3. Use  /  to select "Delete", and press **OK** to confirm.
After pressing **OK** a new, updated title list is displayed.



4. Repeat steps 2 - 3 to delete other titles from the title list.
5. Press  repeatedly to hide the title list.

After Finalization of the Disc

Following insertion of a finalized disc, the disc menu (previously "Title List") appears automatically as shown below:



With "**PAGE UP**" or "**PAGE DOWN**" you can scroll to other pages as required.
You can quit this menu using **EXIT**.

Press **OK** or  to play the selected title.
Using  /  and **OK** you can scroll up and down the list as required or you can use "Exit" to quit the menu.

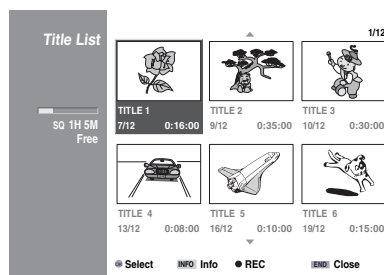
Title List and Chapter List

The "Title List" Menu

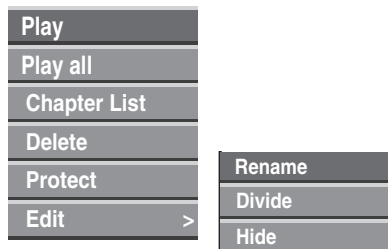
Video +RW

All recorded titles are displayed in the title list, titles can be deleted and other changes can be made to the original content of the disc. Titles can be played directly from the "Title List" menu. The DVD recorder must not be in play mode when editing using the "Title List" menu.

1. Press DISC-M/ **TEXT** to open the "Title List" menu.
With more than 6 titles use **▲ / ▼** to display the previous/next page.
Press **END** to quit the "Title List" menu.



2. To display the title list options, select the desired title and press **OK**.
The options are displayed on the left side of the menu.
3. Use **▲ / ▼** to select an option, and press **OK** to confirm.



- **Play:** Starts playing the selected title without hidden chapters.
- **Play all:** Starts playing the selected title including the hidden chapters.
- **Chapter list:** Changes to the "Chapter List" menu for the selected title.
- **Delete:** Deletes the selected title (see page 54).
- **Protect:** Prevents inadvertent overwriting, changing or deleting of a title (see page 57).
- **Edit:** Contains the following editing options:
 - * **Rename:** Edits the title name (see page 56).
 - * **Divide:** Divides a title in two parts (see page 57).
 - * **Hide:** Hides/Shows all chapters within the title (see page 57).

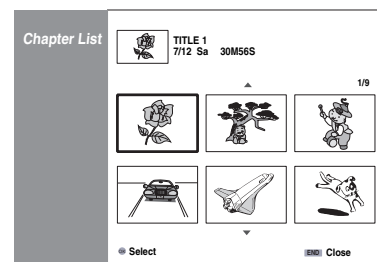
4. Press **END** repeatedly to quit the "Title List" menu.

Note: Press **INFO** to display more detailed information about the selected title.

Caution: If you press **END** in the "Title List" menu, the selected title will be deleted and recording begins (see page 54 for further information).

Using the "Chapter List" Menu

1. Press DISC-M/ **TEXT** for the "Title List" menu.
2. Use **▲ ▼ ◀ ▶** to select the desired title and press **OK**. The options are displayed on the left side of the menu.
3. Use **▲ / ▼** to select the "Chapter List" option and press **OK**.
The "Chapter List" menu is displayed.



4. To display the chapter list options, select the desired chapter and press **OK**.
The options are displayed on the left side of the menu.
5. Use **▲ / ▼** to select an option, and press **OK** to confirm.



- **Play:** Starts playing the selected chapter.
- **Title list:** Changes to the chapter "Title List" menu (see left side of this page).
- **Combine:** Combines two chapters into one (see page 56).
- **Hide:** If you play a higher-level title, the selected chapter will not be played (if you select the function again, the selected chapter is played (see page 57)).

6. Press **END** repeatedly to quit the "Chapter List" menu.

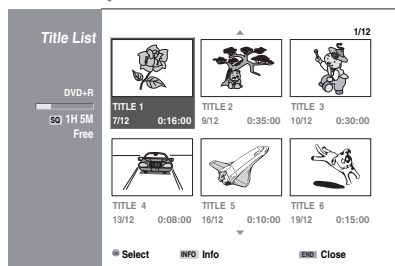
Title List and Chapter List

The "Title List" Menu

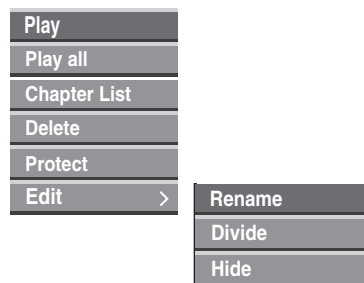
Video +R

All recorded titles are displayed in the title list, titles can be deleted and other changes can be made to the original content of the disc. Titles can be played directly from the "Title List" menu. The DVD recorder must not be in play mode when editing using the "Title List" men

1. Press DISC-M/ to open the "Title List" menu.
With more than 6 titles use / to display the previous/next page.
Press to quit the "Title List" menu.



2. To display the title list options, select the desired title and press **OK**.
The options are displayed on the left side of the menu.
3. Use / to select an option, and press **OK** to confirm.



- **Play:** Starts playing the selected title without hidden chapters.
- **Play all:** Starts playing the selected title

including the hidden chapters.

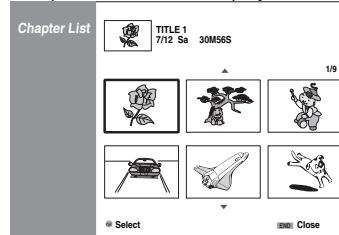
- **Chapter list:** Changes to the "Chapter List" menu for the selected title.
- **Delete:** Deletes the selected title (see page 54).
- **Protect:** Prevents inadvertent overwriting, changing or deleting of a title (see page 57).
- **Edit:** Contains the following editing options:
 - * **Rename:** Edits the title name (see page 56).
 - * **Divide:** Divides a title in two parts (see page 57).
 - * **Hide:** Hides/Shows all chapters within the title (see page 57).

4. Press repeatedly to quit the "Title List" menu.

Note: Press to display more detailed information about the selected title.

Using the "Chapter List" Menu

1. Press DISC-M/ for the "Title List" menu.
2. Use to select the desired title and press **OK**. The options are displayed on the left side of the menu.
3. Use / to select the "Chapter List" option and press **OK**.
The "Chapter List" menu is displayed.



4. To display the chapter list options, select the desired chapter and press **OK**.
The options are displayed on the left side of the menu.

5. Use / to select an option, and press **OK** to confirm



- **Play:** Starts playing the selected chapter.
- **Title list:** Changes to the chapter "Title List" menu (see left side of this page).
- **Combine:** Combines two chapters into one (see page 56).
- **Hide:** If you play a higher-level title, the selected chapter will not be played (if you select the function again, the selected chapter is played (see page 57)).

6. Press repeatedly to quit the "Chapter List" menu.

Title and Chapter Editing

Original Lists and Playlists

VR

If you edit the original lists (for titles and chapters) you change the content of the disc. If, for example, you delete a title or a chapter, the title or chapter is deleted from the disc.

However, if you edit a playlist you do not change the content of the disc. Example: If you delete a title from the playlist, you are simply telling the DVD recorder not to play the title. However, it is not deleted from the disc.

Titles, Chapters and Parts

VR

Titles in the disc's original content contain one or more chapters. If you insert a title into a playlist, all the chapters within that title are also transferred. The chapters in a playlist behave in exactly the same way as those on a DVD-Video disc.

Parts are sections of original or playlist titles. You can add parts to a playlist via the "Title List-Original" and "Chapter List-Original" menus. You can also delete parts from a playlist.

Notes:

- If you add, delete or move parts, the start and end images may be slightly different.
- During playback of a playlist there may be short pauses between the individual items. This is not a malfunction.

Adding Chapter Markers

VR



You can insert a chapter marker anywhere in a playlist or an original title during recording or playback.

Once the chapters have been marked, the chapter search can be used and chapters can be deleted, combined and moved in the Chapter List-Original or the Chapter List-Playlist.

You can insert up to 999 chapter markers.

1. Play a title (original or from a playlist).
2. Press C-SET  at the point you want a new chapter to start. The above display appears on the screen.

Notes:

- Chapter markers can also be added automatically at regular intervals.
- You can change this interval in the main menu "Recording → Automatic Chapter" (see "Automatic Chapter" on page 25).

Changing Title Thumbnails

VR Video



Each title displayed in the "Title List" menu is also represented by a thumbnail. These can be changed as you wish.

1. Play a title (original or playlist).
2. Press TITLE  when the desired new picture appears on the screen. A new thumbnail is then entered into the "Original" or "Play-list" menu.

Creating a New Playlist

VR

You can copy titles or chapters from the appropriate original list into a pre-selected playlist and add them as chapters at the end. (You can delete parts you do not need at a later date. See "Deleting a Part" on page 55).

However, if you add chapter markers at a later date to an item in the original list that has already been copied into a playlist, these new chapter markers are not automatically transferred to the corresponding item in the playlist.

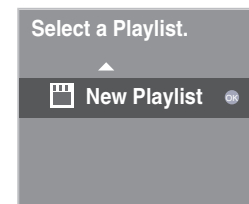
1. Press DISC-M/  to call up the "Title List-Original" menu. To find out how to call up the "Chapter List-Original" menu, read the "The Chapter List-Original Menu" on page 48.
2. Select a title or a chapter in the "Original" menu that you want to put in a playlist and press **OK**. The options are displayed on the left side of the "Original" menu.

Play	Play
Chapter List	Title List
Delete	Delete
Protect	Combine
Edit >	Playlists >
Playlists >	Playlists >

Title List-Original

Chapter List-Original

3. Use ▲ / ▼ to select "Playlists", and press **OK**.



Title and Chapter Editing

4. Select "New Playlist" and press **OK**
The new title is shown in the updated playlist (all chapters within the title are added to the playlist if you have transferred a title into the new playlist).

Adding Additional Titles/Chapters to a Playlist

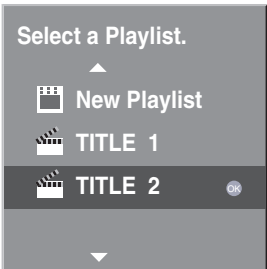
VR

You can add a title or a chapter from the original list to a playlist.

1. Press DISC-M/ **TEXT** to call up the „Title List-Original“ menu.
To find out how to call up the „Chapter List-Original“ menu, read the „The Chapter List-Original Menu“ on page 48.
2. Select a title or a chapter from the original lists for a playlist and press **OK**.
The options are displayed on the left side of the screen.

Play	Play
Chapter List	Title List
Delete	Delete
Protect	Combine
Edit >	Playlists >
Playlists >	

3. Use ▲ / ▼ to select "Playlists", and press **OK**.



4. Select an existing playlist to add a title or a chapter and press **OK**.
The updated playlist is displayed.

5. Repeat steps 1-4 to add additional titles or chapters to a playlist.
6. Select **END** to quit or DISC-M/ **TEXT** to return to the "Title List-Original" menu.

Deleting a Title/Chapter

VR

If you delete a title or chapter from a playlist on DVD-RW discs in VR mode the entry is only removed from the playlist. The title and chapter remain on the disc.

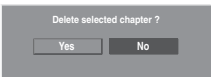
If you delete a title or chapter from the original list, the title or chapter is actually deleted from the disc and additional recording time is released. Titles/chapters deleted from the original lists are also removed from the playlists.

Note: It may not be possible to delete chapters that are less than five seconds long.

1. In the "Title List" menu or the "Chapter List" menu select a title or chapter to delete using ▼ ▲ ◀ ▶ and press **OK**.
The options appear on the left side of the screen.
2. Select the "Delete" option.

Play
Chapter List
Delete
Protect
Edit >
Playlists >

3. Press **OK** to confirm.
The confirm delete message is displayed.



4. Use ◀ / ▶ to select „Yes“ and press **OK**.
The selected title or chapter is deleted.
After pressing **OK** the list is updated.
5. Repeat steps 1 - 4 to delete other items.
6. Press **END** repeatedly to quit the menu.

Note:

- With DVD+RW recordings the name of the deleted title is renamed "Empty Title".
- If more than two titles are deleted they are combined into one "Empty Title".

Title and Chapter Editing

Deleting a Part

VR

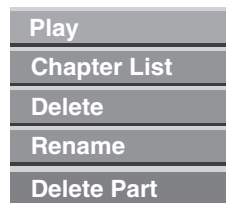
You can delete a part from the original list or from a playlist.

1. Press DISC-M/  once or twice to call up the "Title List-Original" or "Title List-Playlists" menu.
2. Use     to select
 - frame-by-frame advance (press ) repeatedly),
 - slow motion ( +  / ),
 - search ( / ) and / or
 - skip to next / previous chapter (P+ / P-) and press **OK**.

The options are displayed on the left side of the menu.
3. Select the "Delete Part" option in the "Play-lists" menu or "Edit → Delete Part" in the "Title List-Original" menu.

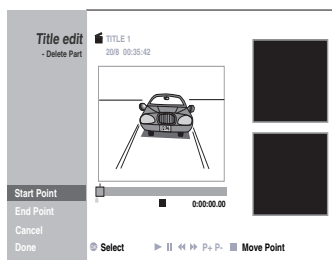


Menu options for "Title List-Original"



Menu options for "Title List-Playlists"

4. Drücken Sie **OK**.
The "Edit Title - Delete Part" menu is displayed on the screen.
The "Starting Point" menu item is highlighted.



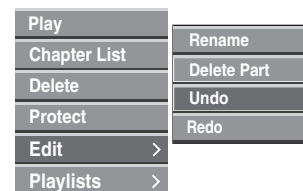
5. Start playback with **OK** and use
 - frame-by-frame advance (press ) repeatedly),
 - slow motion ( +  / ),
 - search ( / ) and / or
 - skip to next / previous chapter (P+ / P-), to find the starting point.
6. Press **OK** at the starting point of the section you want to delete.
The "End Point" menu item is now highlighted.
The part to be deleted is indicated between the two markers on the stylized progress bar proportionate to the entire playlist.
7. Search for the end point using
 - frame-by-frame advance (press ) repeatedly),
 - slow motion ( +  / ),
 - search ( / ) and / or
 - skip to next / previous chapter (P+ / P-), to find the starting point.
8. Press **OK** at the end point of the section you want to delete.
To cancel the deletion, select the "Cancel" symbol using  /  and press **OK**.
9. To delete the selected part, select the "Done" menu item and press **OK**.
The confirm delete message is displayed.
10. Use  /  to select "Yes", and press **OK**.
The selected part is removed from the title and the "Title List-Original" menu or "Title List-Playlists" menu is displayed.

Undoing the Last Deletion

VR

Deletion errors can be undone in the original list (but not in a playlist!). Only the last deletion (i.e. only one action) can be undone.

1. Select "Undo" in the "Title List-Original" menu and press **OK**.



Notes: You cannot undo anything once the DVD disc has been removed from the DVD recorder or the recorder has been switched to standby mode. You cannot undo a recording.

Tip: You can redo the last undo action using "Redo". Select **"Redo"** from the "Title List-Original" menu options and press **OK**.

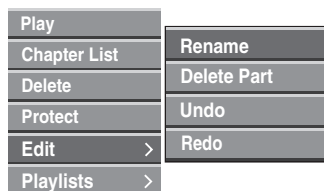
Title and Chapter Editing

Renaming a Title

VR Video

Titles can be renamed. The names can be up to 32 characters long.

1. Use **▲ ▼ ◀ ▶** to select the title to be renamed from the "Title List" menu and press **OK**. The options are displayed on the left side of the menu.
2. Use **▲ / ▼** to select the "Rename" option, and press **OK**.



3. Enter a new name for the title. Use **▲ ▼ ◀ ▶** to select a character and press **OK** to confirm your selection. See step 3 on page 19 (Re-naming a Station).



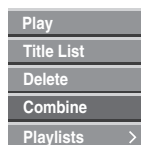
4. Select the **OK** button on the last line of the menu and press **OK** to confirm the new name and to return to the initial menu.
 5. Press **END** repeatedly to quit the menu.
- Note:** When recording using DVD-R, DVD+R or DVD+RW discs, the entered name is only displayed by the DVD player after finalization.

Combining Two Chapters into One

VR

Use this function to combine two adjacent play-list chapters or original chapters into one.

1. In the "Chapter List" menu select the second of the two chapters to be combined and press **OK**. The options are displayed on the left side of the menu.
2. Use **▲ / ▼** to select "Combine".



3. Press **OK** to confirm. After pressing **OK** the updated menu is displayed.

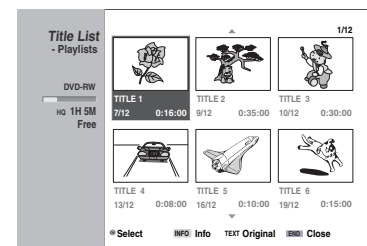
Note: This function is not available if there is only one chapter within the title.

Moving a Chapter / Playlist

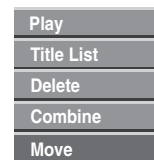
VR

Use this function to change the playback order of the chapters in the "Title List-Playlists" menu.

1. Press **DISC-M/TEXT** twice to call up the "Title List-Playlists" menu. To find out how to call up the "Chapter List-Playlists" menu, read the "The Chapter List-Playlists Menu" on page 49.



2. Select a chapter in the "Chapter List-Playlists" menu.
3. Press **OK**. The options are displayed on the left side of the menu.
4. Use **▲ / ▼** to select "Move", and press **OK**.



5. Use **▲ ▼ ◀ ▶** to select the position you want to move the chapter to (move the blue vertical line) and press **OK** to confirm the move. After pressing **OK** the updated menu is displayed.

Note: This function is not available if there is only one chapter.

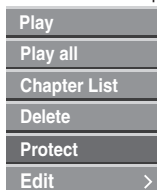
Title and Chapter Editing

Protecting a Title

VR

This function prevents inadvertent overwriting, editing or deleting of a title.

1. Press DISC-M/  for the "Title List" menu.
2. Use     to select a title to lock and press **OK**.
The options appear on the left side of the screen.
3. Select "Protect" from the options.



4. Press **OK** to confirm.
The „Protect Symbol“ (lock) appears in the thumbnail of the protected title.

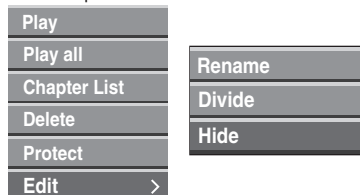
Note: A protected title can also be unprotected using this procedure. The title can then be overwritten, edited or deleted again.

Hiding a Title/Chapter

Video +RW +R

Use this function to hide a title/chapter in the "Title List" menu or the "Chapter List" menu.

1. In the "Title List" menu or the "Chapter List" menu select a title or chapter to hide using     and press **OK**.
2. The options appear on the left side of the screen.
3. Select the option "Edit → Hide".



4. Press **OK** to confirm.
The thumbnail of the title to be hidden now appears dimmed.

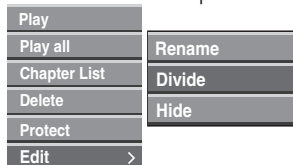
Note: A title that has already been hidden can be “shown” again using the option “Edit → Show” (i.e. the hiding is undone).

Dividing One Title into Two Titles

Video +RW

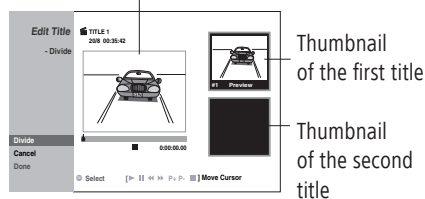
Use this function to divide one title onto two new titles.

1. Use **▲ ▼ ◀ ▶** to select the title to be divided from the "Title List" menu and press **OK**.
The menu options are displayed on the left side of the screen.
2. Select the "Edit → Divide" option.



3. Press **OK** to confirm.
The "Edit Title - Divide" menu appears and the film is stopped.

Current picture



4. Start playback and search for the point at which you want to divide the title using
 - frame-by-frame advance (press  repeatedly),
 - slow motion ( +  / ),
 - search ( / ) and / or
 - skip to next / previous chapter (**P+ / P-**), to find the starting point.
5. Press **OK** at the starting point for the second title.
The division point is shown in thumbnail #2. To

correct the division point, select the "Cancel" function. Now you can set a new division point or cancel the whole division process by using the "Cancel" function again and return to the "Title List" menu.

6. To complete the division, select "Done" and press **OK** to confirm the division. The title is divided into two new titles. This process can take up to 4 minutes.

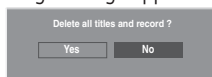
Additional Information

Deleting a Disc and Starting New Recording

Video VR

RW discs have the simple option of deleting everything on the disc and automatically starting a new recording at the touch of a button. The disc format remains unchanged.

1. Switch the recorder on and insert a writable disc.
2. Hold the  key down for more than 3 seconds.
The following message appears on the screen.



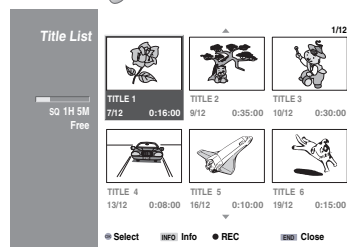
3. Use  /  to select "Yes", and press **OK**.
Recording begins. (The REC indicator lights up in the display window.)

Overwriting a Recording

Video +RW

Follow these steps to overwrite an existing title with a new recording (this is not possible with a DVD+R disc, here new recordings are added after the existing ones):

1. Select the signal source you want to record (TV program, AV1-4, DV).
2. Press DISC-M/  for the "Title List" menu.



3. Use     to select a title to be overwritten.
4. Press  to start the recording.
The new recording begins at the starting point of the title that is being overwritten.
5. To stop the recording press  .

The new title is created and the updated menu is displayed.

Notes:

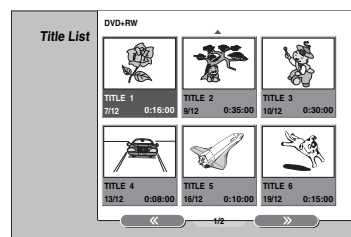
- This function does not work with protected titles.
- If the new title is longer than the one to be overwritten, the next title will also be overwritten. If however the next title is protected, the recording will be stopped at the end of the first title to be overwritten.
- If the recording length of the selected title is less than 10 seconds, the next title will be overwritten. However, if the next title is protected the recording will be stopped.

Viewing Title Lists Created on another DVD Recorder

Video +R +RW

Title list menus for DVD+RW or DVD+R discs created on other DVD recorders can also be displayed on this recorder.

1. Insert a prerecorded DVD+R or DVD+RW disc.
2. Hold down the DISC-M/  button in stop mode for three seconds.
The "Title List" menu appears as below.



3. To play a title select the title and press **OK** or  .

Note: The "Title List" menu can be hidden by pressing  .

Playing your Recordings on other DVD Players

Finalized Video, DVD+R or DVD+RW discs can be played on most DVD players.

A few DVD players can also play prerecorded finalized and unfinalized DVD-RW discs in VR mode. Supported discs are listed in the manual for each player. Finalizing „fixes“ the recordings so that the discs can be played on normal DVD players or computers with DVD-ROM drives. During finalization of a disc in Video mode a disc menu is created for navigating the disc. This is accessed by pressing the DISC-M/  key.

Note: Unfinalized DVD+RW discs can be played on normal DVD players provided that their recordings have not been edited at a later date.

What to do, if ...

Problem	Possible cause	Remedy
No power	The mains cable is not plugged in..	Fix the mains cable firmly into a socket.
No image	The television is not switched to receive signals from the DVD recorder.	Select the right video input mode on the television, so that the image from the DVD recorder appears on the television screen.
	The SCART cable is not properly connected.	Connect the SCART cable properly.
	The television that is connected is switched off.	Switch the television on.
No sound	The connected audio equipment is not switched to DVD playback.	Set the audio receiver so that you can hear the sound playing on your DVD recorder.
	The audio cables are not properly connected.	Connect the audio cable properly.
	The connected audio equipment is switched off.	Switch on the audio equipment that is connected.
	The audio connection cable is faulty.	Change it.
Inferior picture quality.	The disc is dirty.	Clean the disc.
Playback not possible.	There is no disc.	Insert a disc. (Check that the disc display comes on in the display window.)
	A non-playable disc has been inserted.	Insert a writable disc. (Check the disc type, the colour system and the region code.)
	The disc has not been inserted with the playable side downwards.	Insert the disc with the playable side downwards.
	The disc has not been properly placed in the guide.	Position the disc properly into the guide in the disc drawer.
	The disc is dirty.	Clean the disc.
	A security rating has been set.	Cancel the security rating or change the protection.
There is interference with images from an external source.	The video signal from the external component is copy-protected.	You cannot get a connection from this recorder. Connect the component directly into the television.
A channel is skipped when using P+ / P- .	The channels have not been saved in the recorder.	Retune the channels. See channel tuning on pages 18-19.
The image or sound on the transmission channel is weak or absent.	Loose antenna or cable.	Tighten the connections or change the cable.
The camcorder image is not displaying.	The camcorder is switched off.	Switch the camcorder and make sure you are using it properly.
The camcorder image is not appearing on the television screen when using the A/V input or DV IN to the DVD recorder.	The DVD recorder AV selection is wrong.	Select the input channel (AV1, AV2, DV etc.) with DVD-AV.
A disc that was recorded to from this DVD recorder cannot be played on a different DVD player.	The disc was recorded in video mode.	Finalising the disc (see page 26)

What to do, if ...

Problem	Possible cause	Remedy
	Some players do not play discs with finalisation in video mode.	No solution.
	The disc was recorded in VR mode.	The other player must be RW-compatible
	The ability of CD-R / RWs (MP3, JPEG, VCD, SVCD) and DVD+R / RWs and DVD-R / RWs is influenced by the recording equipment, recording methods and data media. Therefore, there may be problems occasionally when playing on conventional DVD players..	No solution.
Playback not possible or unsuccessful.	There is insufficient space on the disc.	Use a different disc
	The source that you want to record is copy-protected.	You cannot record the source
	Copy-protected broadcasts cannot be recorded on a video mode disc.	Use a disc formatted in the VR mode for once copiable material
Timer recording not possible.	The time has not been set correctly on the DVD recorder.	Set the correct time. See "Setting the time automatically" or "Setting the time manually" on page 20.
	The timer was wrongly programmed.	Re-program the timer. See "Timer recording" on page 44
	The time between programming the timer and the start of recording is too short.	The recording's start time must be at least 3 minutes into the future.
	After programming, the timer recording LED is no longer displayed.	Re-program the timer.
Stereo-audio recording and/or playback unavailable.	The television is not stereo-compatible or the broadcast transmission is not in stereo format.	No solution.
	The DVD recorder's A/V Out sockets are not connected to the TV's A/V In sockets.	Make the A/V connections.
	The DVD recorder's audio/video Out has not been selected for the television.	Select the AUX or A/V source as the TV input.
	The DVD recorder's TV audio channel must be set to Mono.	Set the TV's audio channel to stereo. (see page 43)
The remote control is not working properly.	The remote control's batteries have run out.	Replace the old batteries with new ones.

Technical Specifications

General

Centros 1102	Item No. 64501
Centros 1172	Item No. 64511
Power supply	AC 110-240V, 50/60 Hz
Power consumption	During operation: 35 W In standby mode: 5 W
Dimensions (approx.)	430 X 75 X 325 mm (W x H x D)
Weight (approx.)	5.5 kg
Operating temperature	5 °C to 35 °C
Humidity	5 % to 90 %
TV system	Centros 1102: PAL B/G, PAL I, Secam DK Centros 1172: PAL B/G, Secam L
Recording format	PAL

Recording

Recording format	DVD Video-Recording, DVD-VIDEO
Writable discs	DVD-ReWritable, DVD-Recordable, DVD+ReWritable, DVD+Recordable
Writable time	Approx. 1 hour (HQ mode), 2 hours (SQ mode), 4 hours (LQ mode), 6 hours (EQ mode)

Video recording format

Sampling frequency	27MHz
Compression format	MPEG 2

Audio recording format

Sampling frequency	48kHz
Compression format	Dolby Digital

Playback

Frequency response	DVD (PCM 48 kHz): 8 Hz to 22 kHz, CD: 8 Hz to 20 kHz DVD (PCM 96 kHz): 8 Hz to 44 kHz
Signal-to-noise ratio	Over 100 dB (AUDIO OUT connection)
Harmonic distortion	Less than 0.008% (AUDIO OUT connection)
Dynamic range	Over 95 dB (AUDIO OUT connection)

Inputs

AERIAL IN	Aerial input, 75 ohms
VIDEO IN	1.0 Vp-p 75 ohms, negative sync. , RCA socket x 2 / SCART x 2
AUDIO IN	0 dBm over 47 kohms, RCA socket (L, R) x 2 / SCART x 2
DV IN	4 pins (i.LINK/IEEE 1394-Standard)
Cardreader	3 in 1: SD, MMC, Memorystick

Outputs

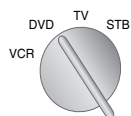
VIDEO OUT	1 Vp-p 75 Ω, negative sync. , RCA socket x 1/ SCART
S-VIDEO OUT	(Y) 1.0 V (p-p), 75 ohms, negative sync., Mini DIN 4-pin x 1 (C) 0.3 V (p-p) 75 ohms
COMPONENT VIDEO OUT	(Y) 1,0 V (p-p), 75 ohms, negative sync., RCA socket x 1 (Pb)/(Pr) 0.7 V (p-p), 75 ohms, RCA socket x 2
Audio output (digital audio)	0.5 V (p-p), 75 ohms, RCA socket x 1
Audio output (optical audio)	optical connection x 1 (TOS-Link)
Audio output (analog audio)	2,0 Vrms (1 kHz, 0 dB), 600 ohms, RCA socket (L, R) x 1 / SCART

- Design and technical specifications are subject to change without notice.
- Manufactured under license from Dolby Laboratories. Dolby, ProLogic and the double-D symbol are trademarks of Dolby Laboratories.
- "DTS" and "DTS Digital Out" are trademarks of Digital Theater Systems, Inc.

Operating additional devices with RC3

Using other Loewe devices with the RC3 remote control

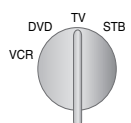
You can use other Loewe devices with this remote control.



Use the rotary switch to select VCR, TV or a set-top box. Loewe video recorders, Loewe television sets and the d-box which is commonly used in Germany as a set-top box are set up ex-factory.

Using the drive buttons in the TV and STB position for a VCR, DVD or digital recorder

With both the TV and the STB, you can switch over the six drive buttons (◀▶, ▶▶, ▶▶▶, ◀◀, ◀◀◀, ◀◀◀◀) so that they control a VCR or DVD player/recorder (ex-factory it is set to control the built-in "Digital Recorder Plus"):

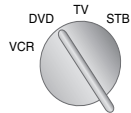


* EPG

9 wxyz

8 tuv

8 tuv



PIP

First set the switch to the main TV or STB function.

Then press the **END** and *** EPG** buttons simultaneously for at least 5 seconds. The display in the top left of the remote control will flash twice.

Key in the figures 988. The display will flash twice more.

Now set the switch to the function that you require for the drive buttons:

to DVD or VCR, or TV if the digital recorder is to be used.

Press the **# PIP** button to finalise the setting. The display will flash another two times.

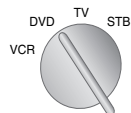
Setting the remote to control devices made by other manufacturers

You can set the remote to work with other video recorders, DVD players or set-top boxes if the infra-red code of the device type appears in the code list or if it is held in the RC3's code memory.

Even if the device's manufacturer appears in the code list, it could be that the device cannot be controlled.

Using a code input to set the remote

Look for the code number for your device in the code list (see from page 63). The list is sorted according to device type – DVD, VCR, STB – and alphabetically by manufacturer. You will find one or more code numbers next to the manufacturer name.



* EPG

0 AV

5 jkl

3 def

9 wxyz

Use the rotary switch to select whether you want to switch to using a VCR, DVD device or a set-top box.

Press the **END** and *** EPG** buttons simultaneously for at least 5 seconds. The display in the top left of the remote control will flash twice.

Key in, one at a time, the four figures that you have found in the code list (e.g. 0539 for the Loewe DVD player).

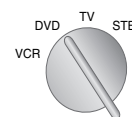
After each figure that you key in, the display will flash once, and after the last figure it will flash

twice. If the figure was wrong, the display will stay illuminated for longer. This means that the code number has not been accepted. If a double-flash signifies that the code has been accepted, you can test the functionality of the device that you have programmed.

If you are unable to control the device, or have difficulty in controlling it properly, repeat the code input with the next code in the list. If there are no other codes listed for the manufacturer in question, try using the remote control's suggestions.

Using the remote's suggestions to set up remote control

Switch on the device which you want to convert the remote control to. Note that Standby is inadequate!



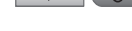
* EPG

9 wxyz

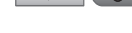
9 wxyz

1

PIP



PIP



* EPG

Use the rotary switch to select whether you want to switch to using a VCR, DVD device or a set-top box.

Press the **END** and *** EPG** buttons simultaneously for at least 5 seconds. The display in the top left of the remote control will flash twice.

Key in, one by one, the figures 991. The display will flash once after each figure is input.

Press the **# PIP** button to select the first code.

Point the remote at the device which you want to convert it to control. Watch the device.

Now press the ▶ (Play) or

On/Off buttons on the remote control.

Wait a moment for the device to react. If the device fails to react, this is not the right code. Press the **# PIP** button again to get the next code.

Press the ▶ (Play) or **On/Off** buttons again.

If the device reacts, press the *** EPG** button to copy over the code.

RC3 code list

Loewe

DVD player	0539
DVD recorder	0741
STB	1127
VCR	0866

The following video recorders may be controlled: ViewVision 8106H, 8136H, 8176H, 6306H, 6336H, 6376H, 6396H, 4306H, 4376H, 2102M, 2302M, 4206, 4236, 4276.

If using devices other than the listed Loewe units, please use the original remote control or the video menu bar.

DVD

3DLAB	0539
A-Trend	0714
Acoustic Solutions	0730
AEG	0788 0770
Aiwa	0641 0695
Akai 0790 0788 0690 0716 0713	0705
AKI	0718
Akira	0699
Alba 0717 0699 0713 0723	0695
All-Tel	0790
Amitech	0770
Amstrad	0713
Apex Digital	0672
Audiosonic	0690
AWA	0730
Black Diamond	0713
Blaupunkt	0717
Blue Sky 0699 0695 0713 0672	0651
Boman	0783
Brain Wave	0770
Brandt	0651 0551
Bush 0699 0690 0689 0717	0723
0713 0818 0695 0831	0768
C-Tech	0696
Cambridge Audio	0696
Cambridge Soundworks	0699
CAT	0672
Celestial	0672
Centrex	0672 1004
Centrum	0713
cineULTRA	0699
Classic	0730
Clatronic	0788
Clayton	0713
Coby	0730

Conia	0672	Hiteker	0672	Neufunk	0665
Crown	0770 0651 0690	Home Electronics	0730	Nordmende	0831
Cybercom	0831	Hyundai	0783	Omni	0690 0699
CyberHome	0714 0816	Ingelen	0788	Onkyo	0627 0503
Cytron	0716 0651 0705	ISP	0695	Optimus	0571
Daewoo	0770 0705 0714	Jeken	0699	Orava	0818
Daewoo International	0699	JMB	0695	Orion	0695
Dansai	0770 0783	JVC	0623 0539 0503 1901 1940	Oritron	0651
Dantax	0723	Karcher	0783	P&B	0818
DEC	0699 0818	Kendo	0699	Pacific	0768 0790 0713 0831
Decca	0770	Kenwood	0534 0490 0737	Palladium	0695
Denon	0490 0634	Kiirio	0718 0770	Palsonic	0689 0672
Denver	0699 0788	Kingavon	0818	Panasonic	0490 1908
Denzel	0665	Kiss	0665	Panda	0783
Diamond	0651 0768 0723	Koda	0818	Philips	0539 0646 0503 1914
Digihome	0713	Koss	0651	Phonotrend	0699
digiRED	0717	Lawson	0705 0716 0768	Pioneer	0571 0631 1900 1902
Digitrex	0672	Lecson	0696	Pointer	0770
DiK	0831	Lenco	0699 0651 0770 0818	Powerpoint	0718
Dinamic	0788	Lenoxx	0690	Proline	0651 0672 0790 1004
DiViDo	0705	Lexia	0699	Proscan	0522
DK digital	0831	LG	0591 0741 1906	Prosonic	0699
DMTECH	0783 0790	Lifetec	0651	Provision	0699
Dragon	0831	Limit	0716 0768	Radionette	0741
Dual	0665 0651 0713 0730	Loewe	0539 1922	Raite	0665
	0783 0790 0831	LogicLab	0768	Rank Arena	0718
E-Boda	0723	Logix	0705 0783	RCA	0522 0651
Eclipse	0723	Lumatron	0705	REC	0689 0490
Electrohome	0770	Luxman	0573	Red Star	0770 0788
Elin	0770	Luxor	1004	Reoc	0768
Elta	0690 0770 0788 0790	Magnavox	0503 0818	Revoy	0699
Emerson	0591 0705	Magnex	0723	Roadstar	0699 0690 0689 0713 0818
Enzer	0665	Manhattan	0705	Rotel	0623
Ferguson	0651	Marantz	0539	Rowa	1004
Finlux	0741 0770 0783	Mark	0713	Saba	0651
Firstline	0651	Matsui	0651 0695	Sabaki	0768
Funai	0695	MBO	0690 0730	Salora	0741
GE	0717	MDS	0699	Samsung	0573 0490
Global Solutions	0768	Medion	0651 0783 0716 0831	Sansui	0695 0716 0768 0723 0770
Global Sphere	0768	Memorex	0831	Sanyo	0670 0695 0790
Go Video	0783	Metz	0571 0713	Scan	0705
GoldStar	0591 0741	MiCO	0723	ScanMagic	0730
Goodmans	0651 1004 0790 0690	Microboss	0718	Schaub Lorenz	0788 0770
	0783 0723 0818	Micromaxx	0695	Schneider	0651 0783 0705 0790 0788
Graetz	0665	Micromedia	0503 0539	Scientific Labs	0768
Grandin	0716	Micromega	0539	Scott	0718 0651 0672
Grundig	0539 0695 0651 0775	Microsoft	0522	SEG	0665 0713 0768
	0705 0790 0713 0670 0723	Microstar	0831	Shanghai	0672
Grunkel	0770	Minax	0713	Sharp	0630 0695
H&B	0818 0713	Minoka	0770	Sherwood	0717 0741 0633
Haaz	0768	Mitsubishi	0713	Shinco	0717
Hanseatic	0741	Mizuda	0818	Silva	0788
HCM	0788	Monyka	0665	SilvaSchneider	0831
HDT	0705	Mustek	0730	Singer	0690 0716 0723
HE	0730	Mx Onda	0651 0723	Skymaster	0730 0768
Henß	0713	NAD	0741	Slim Art	0770
Hitachi	0664 0665 0573	Naiko	0770	SM Electronic	0730 0768 0690

RC3 code list

Smart	0718	0705	0713							0348	0081	Etzuko						0072	JVC					0041	0067	0384
Sonashi				0716	Allorgan					0240		Fast						0897	Kaisui							0072
Sony	0533	0573	1903	1904	Allstar					0081		Ferguson		0041	0320	0000	0278		Kambrook							0037
Soundmaster				0768	Amstrad			0000	0278	0072		Fidelity			0000	0072	0240		Karcher							0278
Soundmax				0768	Anitech					0072		Finlandia	0104	0081	0042	0000	0048		Kendo	0106	0209	0315	0348			0072
Soundwave				0783	Ansonic					0000		0384														0037
Standard			0651	0768	Aristona					0081		Finlux		0000	0081	0104	0042		Kenwood					0041		0038
Starmedia				0818	ASA				0037	0081		Firstline	0072	0209	0348	0043	0037		KIC							0000
Sunwood				0788	Asuka	0072	0037	0081	0000	0038						0045	0042	0278	Kimari							0047
Supervision			0730	0768	Audiosonic					0278		Fisher					0047	0104	0038	Kneissel	0352	0209	0348			0037
SVA				0672	AVP				0352	0000		Flint						0209	Kolster			0209	0348			0037
Synn				0768	AWA		0037	0278	0642	0043		Frontech						0072	Korpel							0072
Tandberg				0713	Baird	0106	0278	0104	0041	0000		Fujitsu						0000	Kuba							0047
Tatung				0770	Basic Line			0278	0209	0072		Funai						0000	Kuba Electronic							0047
Teac	0717	0741	0571	0768	Bestar					0278		Galaxi						0000	Kuwa							0226
				0790	Black Diamond					0642	0278	Galaxis						0278	Kyoto							0072
Technics			0490	1908	Black Panther					0278		GE						0320	Lenco							0278
Technika				0770	Blaupunkt			1562	0226	0081		GEC						0081	Leyco							0072
Techwood				0713	Blue Sky	0037	0209	0348	0072			General Technic						0348	LG			0037	0000			0278
Tensai			0690	0651				0352	0278	0000		Genexxa						0104	Lifetec					0209		0348
Tevion			0651	0768	Bondstec					0072		Goldhand						0072	Loewe	0081	1562	0226	0866			0037
Theta Digital				0571	Brandt				0041	0320		GoldStar					0037	0000	Logik			0240	0072	0106		0209
Thomson			0551	0522	Brandt Electronique					0041		Goodmans		0000	0072	0240	0278		Lumatron							0278
Tokai			0665	0788	Brinkmann				0209	0348			0037	0081	0348	0209	0352	0642	Luxor	0106	0043	0072	0104			0047
Tokiwa			0705	0716	Bush0072	0278	0315	0209	0352	0000		Graetz					0041	0104	0240							0048

RC3 code list

0041						Seleco			0041	0384	0037				Ultravox		0278	Blaupunkt			0173	
Okano	0315	0209	0348	0072	0278	Sentra					0072				Unitech		0240	Blue Sky		0713	0885	
Orbit					0072	Setron					0072				United Quick Star		0278	Boca		0132	0713	
Orion			0209	0352	0348	Sharp			0048	0037	0569				Universum	0000	0081 0240	Boston	0132	0710	0668	
Orson					0000	Shintom				0072	0104					0106 0348 0209	0104	Broco			0713	
Osaki			0000	0037	0072	Shivaki					0037				Victor		0067	BskyB		0847	1175	
Osume					0072	Siemens	0037	0104	0081	0320	0347				Watson	0081	0352 0278	BT		0668	0710	
Otake					0209	Siera					0081				Weltblick		0037	Bubu Sat			0713	
Otto Versand					0081	Silva					0037				Yamaha		0041	Cambridge			0501	
Palladium	0072	0315	0037	0041	0209	Silver					0278				Yamishi		0072 0278	Canal Satellite			0853	
			0240	0348	0432	Singer					0045				Yokan		0072	Canal+			0853	
Palsonic				0072	0000	Sinudyne				0081	0209				Yoko		0037 0072	Cherokee		0123	0710 1323	
Panasonic				1562	0226	Smaragd					0348				ZX		0209	Chess		0157	0605 0713 1085	
Pathe Cinema					0043	Sonitron					0047							CityCom		1176	0115 0607 0299	
Pathe Marconi					0041	Sonneclair					0072							Clemens Kamphus			0834 0396	
Perdio				0000	0209	Sonoko					0278				SAT /STB				Cobra			0396
Philco				0038	0072	Sonolor					0048							Colombia		0668	0132	
Philips				0081	0384	Sontec				0037	0278				@sat		1300	Columbia			0132	
Phoenix					0278	Sony				0032	0106				ABsat	0668	0123 1323	Columbus			0668	
Phonola					0081	Soundwave			0037	0209	0348				ADB		0642	Comag			0132	
Pioneer			0067	0081	0042	Ssangyong					0072				Adcom		0200	Condor			0607	
Portland					0278	Standard					0278				AGS		0668 0710	Connexions			0396	
Prinz					0000	Starlite				0037	0104				Akai		0200	Conrad	0607	0573	0115 0501	
Profitronic				0081	0240	Stern					0278				Akena		0668	Conrad Electronic		0607	0713	
Proline				0000	0320	Sunkai	0209	0348	0278						Alba		0455 0713	Cryptovision		0455	0795	
Proscio					0278	Sunstar					0000				Allsat		0200 1017	Cyrus			0200	
Prosonic			0209	0278	0000	Suntronic					0000				Alltech		0713	D-box		1127	1114 0723	
Protech					0081	Sunwood					0072				Alpha		0668 0200	Daeryung			0396	
Provision					0278	Supra			0037	0240					Altai		0396	Daewoo		1296	0713	
Pye					0081	Symphonic				0000	0072				Amitronica		0713	Delfa			0863	
Quasar					0278	T+A					0226				Ampere		0396 0132	Deltasat			1075	
Quelle					0081	Taisho					0209				Amstrad	0847 0713 0742	0396 0132	DGTEC			1242	
Radialva		0037	0072	0081	0048	Tandberg					0278					0882 0885 0863 0501	0795 1113	Digatron			1294	
Radiola					0081	Tashiko	0000	0048	0240	0081	0037				Anglo		0713	Digenius			0299	
Rank					0041	Tatung	0000	0041	0081	0048	0043				Ankaro		0713	Digitality			0607	
Reoc			0209	0348	0278				0209	0348	0352				AntSat		1017 1083	Digipro			1105	
Rex				0041	0384	Teac	0072	0041	0000	0278	0642				Apollo		0455	DigiQuest			0863	
RFT					0072				0037	0081	0307				Arcon	1205 1043 0834	0132 1075	Diskoverer		0605	0157	
Roadstar		0240	0072	0037	0278	TEC				0278	0072				Armstrong		0200	Diskovery		0668	0710	
Royal					0072	Tech Line					0072				Asat		0200	Diseqc			0710	
Saba		0041	0320	0384	0278	TechniSat				0348	0209				ASLF		0713	Distratel		0084	0885 1205	
Saisho				0209	0348	Teleavia					0041				AssCom		0853	Distrisat			0200	
Salora			0043	0106	0104	Telefunken		0041	0320	0384	0278				Astacom		0668 0710	DMT			1075	
Samsung				0240	0432	Teletech			0072	0278	0000				Aston		1129	DNT		0200	0396	
Sansui	0041	0067	0106	0072	0348	Tenosal					0072				Astra		0607 0713	DREAM multimedia.TV			1237	
Sanyo		0104	0047	0048	0067	Tensai		0000	0037	0072					Astro	0133 0173 0501	0658 0607	DStv		0642	0879	
Saville			0352	0278	0240	Tevion				0348	0209					1113 1099 1100	0200					
SBR					0081	Thomson	0320	0041	0067	0384	0278				Athena		0668	Echostar	0610	1169	0871 0167 0853	
Scan Sonic					0240	Thorn			0041	0104	0037				Atlanta		0871		1086	1200	0454 0396 0713	
Schaub Lorenz		0041	0104	0000	0106	Thorn-Ferguson					0320				Aurora		0879				0668 0511 0453	
					0315	Tokai		0072	0037	0041	0104				Austar	0863	0642 0497	Einhell			0132 0713 0501	
Schneider	0072	0000	0037	0081	0278	Tokiwa					0072				Avalon		0396	Elap	0713	1129	0668 0710	
			0240	0042	0897	Topline					0348				Axiel		0668 0710	Elsat			0713	
Seaway					0278	Toshiba	0045	0041	0384	0043	0081				Axis		1111 0834	Elta			0200	
SEG		0072	0240	0278	0642	Towada					0072				Beko		0455	Emme Esse			0871	
SEI					0081	Tredex					0278				Bentley Walker		1017	Engel		1017	0713	
Sei-Sinudyne					0081	Uher			0037	0240								EP Sat			0455	

SAT /STB)

RC3 code list

Eurieult	0084	0885	0882	International			0132	Minerva			0571	Radix		0396	1113	0882
Eurocrypt			0455	Interstar		1105	1017	Mitsubishi			0455	RFT				0200
Europa	0863	0607	0501	0200	Intervision		0628	0607	Morgan's	0200	0713	0132	Roadstar			0713
Europhon			0299	0607	Invideo		0871	Motorola			0856	Rover			0628	0713
Eurosky	0607	0132	0299	0115	IRTE		0609	Multichoice		0642	0879	Saba	0710	0885	0115	0607
			0114	0501	Italtel		0871	Multitec			0157	Sabre				0455
Eurostar			0607	0115	ITT Nokia	0573	0455	0723	Myryad		0200	Sagem			0820	1114
Fenner	0668	0157	0605	0713	JOK		0710	Mysat			0713	Samsung	0863	1243	1343	0853
Ferguson			0455		JVC		0571	Netgem			1322				1017	1293
Fidelity			0501		K-SAT		0713	Neuhaus	0501	0713	0834	SAT				0501
Finlandia			0455		Kamm		0713	Neusat			0713	0834	Sat Control			1300
Finlux		0573	0455		Kaon		1300	Nikko			0713	0723	0200	Sat Partner		0501
Flair Mate			0713		KaTelco		1111	Nokia	1023	1114	0751	1127	0723	Sat Team		0713
Force			1101		Kathrein	0658	0249	1057	0173	0853	0573	1223	0455	1723		0605
Fortec Star			1017	1083		1221	0200	0713	0668			1310	1312	Satcom		0713
Foxtel	0879	0720	0455	0497		0123	0115	1323	0710				0455	Satec		0628
			0795	1176	Kathrein Eurostar			0115					0879	Satline		1083
Fracarro			0871	0668	Kiton			0114					1294	Satstation		1206
Freecom			0501	0173	Klap		0668	0710					0668	Schneider	0710	0668
Freesat				0882	Konig			0607					0133	Schwaiger	0605	0157
FTEmaximal			0713	0863	Koscom		0834	1043					0834		0157	0607
Fuba	0396	0173	0573	0115	0299	Kreiling	0658	0249	0114				0879	SCS		0115
Fugionkyo				1105		Kreiselmeier		0173					0157	Seemann		0299
Galaxis	1111	1101	0834	0863	1176	Kyostar		0132					0497	SEG	0605	0742
0853	0115	0879				L&S Electronic		1043					1205	Seleco		0871
Garnet				1075		Labgear		1296					0668	Septimo		1205
GF			0834	1043	LaSAT	0607	0115	0132	0157	0299			0241	Siemens		0173
GF Star				1043	Lenco			0713	0115	0607			0791	Skantin		0713
GOD Digital				0200	Lenson				0501				0710	Skinsat		0501
Goldbox				0853	Lexus			0200			0720	0497	0200	0853	0710	1423
Goldvision				1017	LG			1075					0710	SKR		0713
Gooding				0571	Lifesat		0605	0299	1043	0713			0299	Sky	0847	0856
Goodmans			1284	0455	Logix				1017	1075			0501	SKY+		1175
Gradiente				0887	Lorenzen	0299	1294	0607	0742	0132			0615	Skymaster	0713	0605
Granada				0455	Luxor			0573	0501				0879		0605	0157
Grandin				0084	M&B1			0605					1320	SkySat		0605
Grundig	0173	0847	1150	1291	1435	Manata		0710	0668	0713			0668	SL		0132
	0571	0750	0879	0885	0853	Manhattan	1083	0455	0710	0668			0750	SM Electronic	0157	0713
				1297	1330			0834	1017				1336			1075
Hanseatic			0605	1099	1100	Marantz			0200				0668	Smart	0132	0299
Hänsel & Gretel				0132	0607	Maspro	0750	0713	0173	0571			0863		0396	1113
Hauppauge					1294	Matsui		0571	0710	0173			0329	Sony	0282	0847
HDT				1011		Max			0607				0871	SR		0132
Heliocom				0607		MB			0605					Starland		0713
Helium				0607		Mediabox			0853					Strong	0879	0853
Hirschmann	0396	0882	1113	1111	Mediacom			1206						Sunsat		1105
	0173	0573	1085	0299	0501	MediaSat		0501	0853					Sunstar		1159
			0710	0607	0668	Medion		0713	0299	1043				Tantec		0713
				0455	Medison				0713					Tatung		0132
Hitachi				0742	0132	Mega			0200					Teac		0455
HNE				0668	0396	Metronic	0713	1215	0084	0885				Tecatel		1322
Houston				1176	0863	Metz			0173					TecniSat	0200	1099
Humax				1017	1075	Micro		0607	0501	0713						1100
Huth	0132	0607		1159	1075	Micro electronic			0713					Technosalt		0501
Hyundai		1011		1176	0863	Micro Technology			0713					Technowelt		1206
ID Digital					0084	Micromaxx			0299					Techsan	0607	0885
Imex				0396	0882	Microtec			0713					Techwood		1017
Ingelen														Telasat	0605	0115
																0607

RC3 code list

Teleciel	1043	France Telecom	0817
Telecom	0713	General Instruments	0276
Telefunken	0710	Jerrold	0003 0276
Teleka	0396 0750 0501 0607 0834	Kabelvision	0003
Telesat	0605 0607	Macab	0817
Telestar	0501 1099 1100 0114	Melita	0003
	0200 0157	MNet	0443
Teletech	0114	Mr Zapp	0817
Televes	0455 0501 0132	Noos	0817
Thomson	0455 0713 0853 0115 0607	NTL Cabletell	0276
	12910820 0668 0710 1046	Ono	1068
Thorn	0455	Optus	0276 1060
Tokai	0200	Pace	1068 1060
Tonna	0455 0668 0501 0713 0834	Philips	0817 0286
Topfield	1206	PVP Stereo Visual	0003
Toshiba	0455	Sagem	0817
TPS	0820 1253	Tele+1	0443
Triasat	0501	Telepiu	0443
Triax	0501 0115 0200 0396 0713	Tudi	0286
	08530114 1296 1291 0132	United Cable	0003
Turnsat	0713	Visiopass	0817
Twinner	0132 0713		
UEC	0879		
Uher	0157		
Unisat	0200		
Universum	0173 0571 0607 0299		
	0115 0742 1087		
Van Hunen	0299		
Variosat	0173		
Ventana	0200		
Vestel	0742		
VH-Sat	0299		
Viasat	1323 1023 0820		
Visionic	1105		
Visiosat	0710 0713		
Wetekom	0157 0605 0501		
Wewa	0455		
Wisi	0173 0396 0299 0455 0501		
	0607 0834		
Worldsat	0710 0114 0123 0668		
XCOM	0123 0668		
XSat	0668 0713 0123		
Xtreme	1300		
YES	0887		
Zehnder	1075 0742 0114 0115 0419		
Zenith	0856		
Zeta Technology	0200		
Zinwell	1176		

Cable Box (STB)

Austar	0276
BT	0003
Canal Plus	0443
Comcrypt	0443
Decsat	0423
Filmnet	0443

Language Code List

Enter the appropriate code when first setting up “Disc Audio”, “Disc Subtitles” and/or “Disc Menu”. (Further information can be found under “Disc Languages” on page 21.)

Code	Language	Code	Language	Code	Language
6565	Afar	7387	Hebrew	8379	Somali
6566	Abkhaz	7465	Japanese	8381	Albanian
6570	Afrikaans	7473	Yiddish	8382	Serbian
6577	Amharic	7487	Javanese	8385	Sudanese
6582	Arabic	7565	Georgian	8386	Swedish
6583	Assamese	7575	Kazakh	8387	Swahili
6588	Aymara	7576	Greenlandic	8465	Tamil
6590	Azerbaijani	7577	Cambodian	8469	Telugu
6665	Bashkir	7578	Canadian	8471	Tadzhik
6669	Byelorussian	7579	Korean	8472	Thai
6671	Bulgarian	7583	Kashmiri	8473	Tigrinya
6672	Bihari	7585	Kurdish	8475	Turkmen
6678	Bengali; Bangla	7589	Kirgiz	8476	Tagalog
6679	Tibetan	7665	Latin	8479	Tongan
6682	Breton	7678	Lingala	8482	Turkish
6765	Catalan	7679	Laotian	8484	Tatar
6779	Corsican	7684	Lituanian	8487	Twi
6783	Czech	7686	Latvian	8575	Ukranian
6789	Welsh	7771	Malagasy	8582	Urdu
6865	Danish	7773	Maori	8590	Uzbek
6869	German	7775	Macedonian	8673	Vietnamese
6890	Bhutanese	7776	Malayalam	8679	Volapuk
6976	Greek	7778	Mongolian	8779	Wolof
6978	English	7779	Moldovian	8872	Xhosa
6979	Esperanto	7782	Marathi	8979	Yoruba
6983	Spanish	7783	Malay	9072	Chinese
6984	Estonian	7784	Maltese	9085	Zulu
6985	Basque	7789	Burmese		
7065	Persian	7865	Nauruan		
7073	Finnish	7869	Nepalese		
7074	Fijian	7876	Dutch		
7079	Faroese	7879	Norwegian		
7082	French	7982	Oriya		
7089	Frisian	8065	Punjabi		
7165	Irish	8076	Polish		
7168	Scottish	8083	Pashto		
	Gaelic	8084	Portuguese		
7176	Galician	8185	Quechua		
7178	Guarani	8277	Romansh		
7185	Gujarati	8279	Romanian		
7265	Hausa	8285	Russian		
7273	Hindi	8365	Sanskrit		
7282	Croatian	8368	Sindhi		
7285	Hungarian	8372	Serbocroat		
7289	Armenian	8373	Singhalese		
7365	Interlingua	8375	Slovak		
7378	Indonesian	8376	Slovene		
7383	Icelandic	8377	Samoan		
7384	Italian	8378	Shona		

List of country codes

Key in the corresponding code when first setting the "country code" (see page 24).

Code	Country code	Code	Country code	Code	Country code	Code	Country code
AD	Andorra	CV	Cape Verde	HU	Hungary	MS	Montserrat
AE	United Arab Emirates	CX	Christmas Islands	ID	Indonesia	MT	Malta
AF	Afghanistan	CY	Cyprus	IE	Ireland	MU	Mauritius
AG	Antigua and Barbuda	CZ	Czech Republic	IL	Israel	MV	Maldives
AI	Anguilla	DE	Germany	IN	India	MW	Malawi
AL	Albania	DJ	Djibouti	IO	British Territory in the Indian Ocean	MX	Mexico
AM	Armenia	DK	Denmark			MY	Malaysia
AN	Dutch Antilles	DM	Dominica	IQ	Iraq	MZ	Mozambique
AO	Angola	DO	Dominican Republic	IR	Iran	NA	Namibia
AQ	Antarctic	DZ	Algeria	IS	Iceland	NC	New Caledonia (French)
AR	Argentina	EC	Ecuador	IT	Italy	NE	Niger
AS	American Samoa	EE	Estonia	JM	Jamaica	NF	Norfolk Island
AT	Austria	EG	Egypt	JO	Jordan	NG	Nigeria
AU	Australia	EH	West Sahara	JP	Japan	NI	Nicaragua
AW	Aruba	ER	Eritrea	KE	Kenya	NL	Netherlands
AZ	Azerbaijan	ES	Spain	KG	Kirghizia	NO	Norway
BA	Bosnia-Herzegovina	ET	Ethiopia	KH	Cambodia	NP	Nepal
BB	Barbados	FI	Finland	KI	Kiribati	NR	Nauru
BD	Bangladesh	FJ	Fiji	KM	Comoros	NU	Niue
BE	Belgium	FK	Falkland Islands	KN	Saint Kitts and Nevis Anguilla	NZ	New Zealand
BF	Burkina Faso	FM	Micronesia	KP	North Korea	OM	Oman
BG	Bulgaria	FO	Faroe Islands	KR	South Korea	PA	Panama
BH	Bahrain	FR	France	KW	Kuwait	PE	Peru
BI	Burundi	FX	France (European Territory)	KY	Cayman Islands	PF	Polynesia (French)
BJ	Benin			KZ	Kazakhstan	PG	Papua New Guinea
BM	Bermuda	GA	Gabon	LA	Laos	PH	Philippines
BN	Brunei Darussalam	GB	Great Britain	LB	Lebanon	PK	Pakistan
BO	Bolivia	GD	Grenada	LC	Saint Lucia	PL	Poland
BR	Brazil	GE	Georgia	LI	Liechtenstein	PM	Saint Pierre and Miquelon
BS	Bahamas	GF	French Guyana	LK	Sri Lanka	PN	Pitcairn Island
BT	Bhutan	GH	Ghana	LR	Liberia	PR	Puerto Rico
BV	Bouvet Island	GI	Gibraltar	LS	Lesotho	PT	Portugal
BW	Botswana	GL	Greenland	LT	Lithuania	PW	Palau
BY	Byelorussia	GM	Gambia	LU	Luxembourg	PY	Paraguay
BZ	Belize	GN	Guinea	LV	Latvia	QA	Qatar
CA	Canada	GP	Guadeloupe (French)	LY	Libya	RE	Reunion (French)
CC	Cocos (Keeling) Islands	GQ	Equatorial Guinea	MA	Morocco	RO	Rumania
CF	Central African Republic	GR	Greece	MC	Monacco	RU	Russian Federation
CG	Congo	GS	S. Georgia & S. Sandwich Islands	MD	Moldova	RW	Rwanda
CH	Switzerland	GT	Guatemala	MG	Madagascar	SA	Saudi Arabia
CI	Ivory Coast	GU	Guam (USA)	MH	Marshall Islands		
CK	Cook Islands	GW	Guinea Bissau	MK	Macedonia		
CL	Chile	GY	Guyana	ML	Mali		
CM	Cameroon	HK	Hong Kong	MM	Myanmar		
CN	China	HM	Heard and McDonald Islands	MN	Mongolia		
CO	Columbia			MO	Macao		
CR	Costa Rica	HN	Honduras	MP	Northern Mariana Islands		
CS	Former Czechoslovakia	HR	Croatia	MQ	Martinique (French)		
CU	Cuba	HT	Haiti	MR	Mauretania		

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Subject to modifications!