Operating Manual

DVD
- Centros 2102 HD
- Centros 2172 HD

LOEWE.

Contents

Remote control RC3 – DVD operation

LOEWE.

Change-over switch for operation of TV , VCR, DVD or Set T op Box

Sound off/on

Set mark er / in menu: highlights title/chapter

Select camera position

Timer recording menu / timer recording list menu on

Call A V selection (AV1-AV4,DV,TV)

Main menu on

User interface of loaded DVD on in menu: switch between original and playlist

V–/V+ volume quieter/louder

in menu: select / adjust

Insert a new chapter marker DivX: select subtitles

ShowView menu on

Press short during playback: Start of current chapter /previous chapter Press short during pause: slow motion back Press long during playback: search back

Record

Playback

Pause /single frame

Switch DVD player on/off – in standby

Marker search menu on

Repeat

Zoom

in menu: enter digits / in stop mode (menu off): select programme (TV)

Picture in picture (PIP) on/off

Close menu

Info / menu bar on/off

Next chapter / in stop mode (menu off): next programme

Status display (TV, DVD-RW) / in menu: cofirm the menu selection

Start of current chapter / previous chapter / in stop mode (menu off): previous programme

Audio/Foto Card Reader operation on/off

Enter a new title thumbnail / switch between photo and MP3/WMA operation

Press short during playback: next chapter Press short during pause: slow motion forward Press long during playback: search forward

Stop

DVD TV STB

VCR

Set List

REC-MENU RADIO

1   2 abc   3 def

4 ghi   5 jkl   6 mno

7 pqrs   8 tuv   9 wxyz

DVD-AV
EPG   0 AV   # PIP

DISC-M
TEXT MENU END INFO

P+

V– OK V+

P–

C-SET   CARD
SV   TITLE

Note: If you have a Loewe TV set with an RC3 remote control, we recommend you to only use the RC3 remote control enclosed with the Centros 2102 to operate both units because you could otherwise have problems operating the Centros 2102 (unit does not respond).

Centros Front Panel

Power button
Switch off in standby

Disc tray

Display

Front flap
(closed)

LOEWE.

20:42

DVD DOLBY dts VIDEO plus+ SHOWVIEW DIVX HDMI

CENTROS 2102 HD

Disc tray
open/close

Input 4 /
S-Video IN

DV IN

Beginning of chapter / previous chapter

Stop

Pause

Play

Next chapter

LOEWE.

DVD - R W   ST   SQ

PR-05   20:42

AUDIO/PHOTO
CARD READER

HDMI Pixel Prog - Prog +

VIDEO IN 4 /
AUDIO IN 4 L/R

Front flap
(open)

Memory Card
slot left
CF / MD

Memory Card
slot right
SD / MMC / MS /
MS-Pro / XD / SMC

Record

HDMI
output
on/off

Pixel
(screen
resolution)

Station
P- / P+

Centros Rear Panel & Display

AERIAL
Aerial connection

EURO AV 2 DECODER
SCART connection for an external source (Decoder, Set-Top-Box, Video Recorder etc.).*

DIGITAL OUT
Digital, coaxial audio output

COMPONENT VIDEO OUT (Y Pb Pr)
Connection for a TV with component inputs (Cinch), *

VIDEO OUT/AUDIO OUT (L/R)
Connection for a TV with video / audio inputs (Cinch)

VIDEO IN 3/AUDIO IN 3 (L/R)
Connection for an external source (Audio System, TV/Monitor, VCR, Camcorder etc.) with video / audio inputs (Cinch).

RF. OUT
Passes the aerial signal to the TV

EURO AV 1 AUDIO/ VIDEO
SCART connection for TV set

VIDEO OUTPUT switch
Position RGB: EURO AV1 socket gives out the RGB signal and COMPONENT VIDEO OUT socket does not supply a signal
Position COMPONENT: COMPONENT VIDEO OUT socket gives out the RGB signal and EURO AV1 socket does not supply a signal
* Please note the position of the switch here.

OPTICAL
Digital, optical audio output

S-VIDEO OUT
Connection for a TV with S-Video input.

HDMI OUT
connection of a TV with HDMI input

Mains cable

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

REC Indicates whether recording is in progress

REC
DVD

Indicates when the recorder is in timer recording or a timer recording is programmed

DVD disc is inserted in recorder

Character indicators
Clock, total playback time, elapsed time, title number, chapter / track number, channel etc.
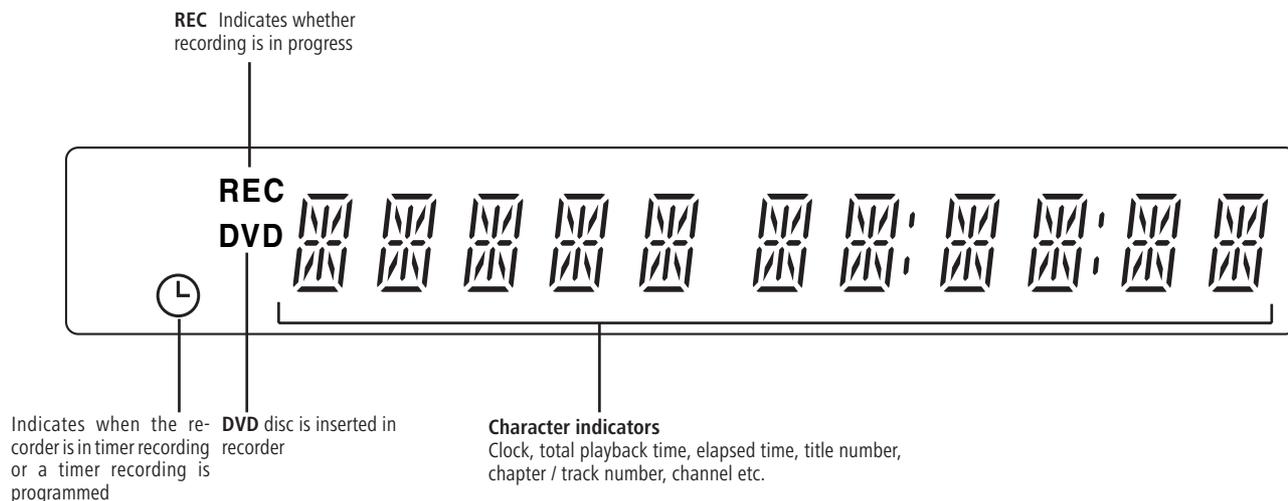
Welcome

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
- HDMI 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 is the case, do not position the unit in the direct vicinity of a TV set, 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.

```
CLASS 1 LASER PRODUCT
KLASSE 1 LASER PRODUKT
LUOKAN 1 LASER LAITE
KLASS 1 LASER APPARAT
CLASSE 1 PRODUIT LASER
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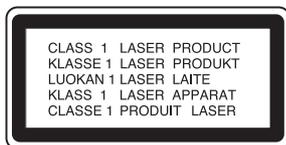
- Do not open up the housing, or you could be directly exposed to the laser beam. The laser beam will be visible if the unit is open. DO NOT LOOK INTO THE LASER BEAM.

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).
When you use the HDMI connection the TV switches over to this input automatically as long as it supports this function.
If you want to make timer recordings from the satellite tuner in the television, the recording is controlled by **Digital Link Plus**.

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.

DVD+R DL (Digital Versatile Disk + Recordable; Double Layer)

These discs can be written once. The storage capacity of 8.5 GB is almost double that of single-layer DVDs. The disk dVD+R DL can no longer be written or changed once it has been finalised.

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

Audio-DVD

Video-CD (VCD, XVCD, SVCD, XSCVD; 8 cm- / 12 cm disk)

Audio-CD
(8 cm- / 12 cm disk)

CD-R/RW
(8 cm- / 12 cm disk)

DVD-R/DVD-RW disks, DVD+R/DVD+RW disks, CD-R/CD-RW disks with audio titles, DivX, MP3/WMA* or JPEG files, VCD/XVCD/SVCD/SXVCD and Kodak Picture-CDs (JPEG) can also be played on this unit.
* 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 country 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.

Video	DVD-R/RW disc with Video mode
VR	DVD-RW disc with VR mode
+R	DVD+R disc
+RW	DVD+RW disc
DVD-V	DVD-Video disc
DVD-A	DVD-Audio disc
VCD	Video CD
CD	Audio CD
DivX	DivX files
MP3	MP3 files
WMA	WMA files
JPEG	JPEG files

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 three recording modes: VR mode, Video mode and Data mode. Recordings on DVD-R discs are always in Video mode. Recordings on DVD-RW discs can be in either VR or Video mode. Files of memory cards, e.g. MP3 can be recorded on discs in Data 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 49 and 50).

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 / +R DL 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 / +R DL 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 seven different types of DVD disc:
- DVD-Video disc
- DVD-Audio disc
- DVD-RW disc
- DVD-R- disc
- DVD+RW disc
- DVD+R- disc
- DVD+R DL- 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- or Data format through subsequent reformatting ("Disc -➜ Formatting" in the main menu) (Caution! The contents of the disc will be erased).

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 remaining 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 longer.
- 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
	Data disk	Data mode	Recording of MP3/WMA, JPG, DivX files
DVD-R	Video format	Video mode	Playback, limited recording, limited editing
	Data disk	Data mode	Recording of MP3/WMA, JPG, DivX files
DVD+RW	Video format	Video mode	Playback, limited recording, editing of titles/chapters
	Data disk	Data mode	Recording of MP3/WMA, JPG, DivX files
DVD+R / +R DL	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. Sldie 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.
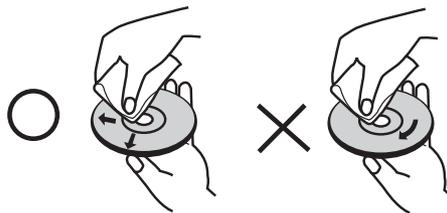
Do not use any strong solvents such as alcohol, benzine, thinner, commercially available cleaners or anti-static sprays intended for vinyl records.

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.

Back of the television

Antenna

R

Back of the DVD recorder
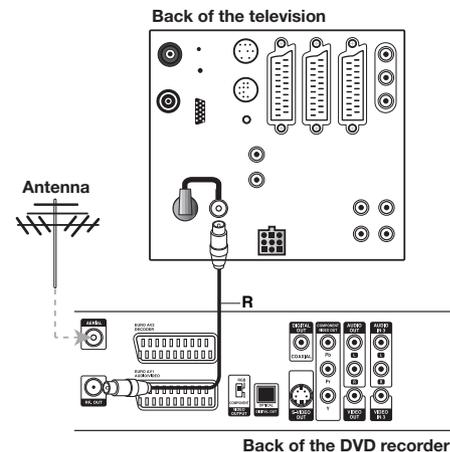
Initial Installation

Connecting to the Television

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

Back of the television

Back of the DVD recorder
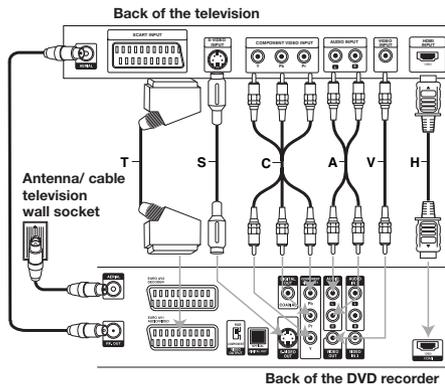
SCART Connection (e.g. Loewe TV)

Connect the EURO AV1 AUDIO/VIDEO Scart socket on the DVD recorder to the corresponding input socket on the television using Scart cable **(T)**. Move the VIDEO OUTPUT switch to the "RGB" position.

HDMI-Verbindung (z.B. Loewe TV)

Verbinden Sie die HDMI-Buchse des DVD-Recorders mit Hilfe des mitgelieferten HDMI-Kabels **(H)** mit der entsprechenden Eingangsbuchse am TV-Gerät bzw. Monitor. Nehmen Sie dann die erforderlichen Einstellungen wie auf Seite 30 beschrieben vor.

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 (available in specialised trade) **(C)**. Move the VIDEO OUTPUT switch to the "COMPONENT" position.

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)**.

Digital Audio output

If you have a digital surround amplifier, you should connect this to the DVD recorder via Digital Audio. To do this, connect the DIGITAL-OUT socket of the DVD recorder to the DIGITAL-IN socket of the surround amplifier.

Note: If you use the COMPONENT VUDEO 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. The function enables you to record a TV program from the integrated analog terrestrial TV tuner of this recorder while watching a satellite or Set-Top Box channel (see Decoder on AV1/2 on page 21/25). .
Do not connect the recorder "via" your video recorder, satellite receiver or Set Top Box.

Back of the DVD recorder

Back of the television

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 the recorder but as shown in the figure below to the satellite/Set-Top Box.
- 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.

Decoder

Antenna/ cable television wall socket

Set-Top Box or satellite receiver

Back of the DVD recorder

Back of the television
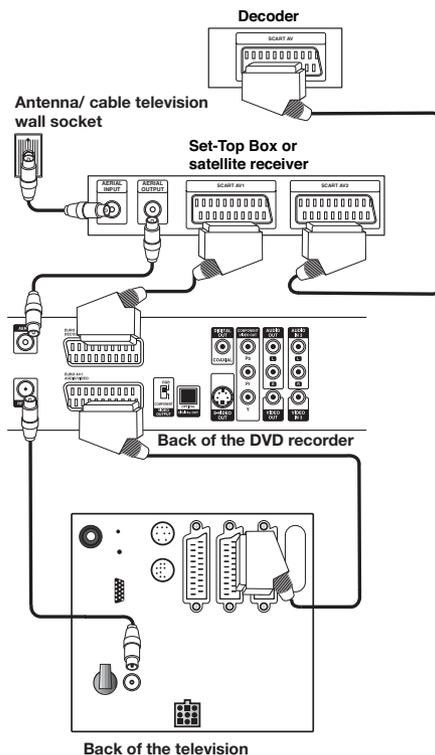
Connecting to an Amplifier

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** - available in specialised trade).

2. You must configure the digital output of the recorder (see "Audio" on page 22).

Back of the DVD recorder

Amplifier (Receiver)
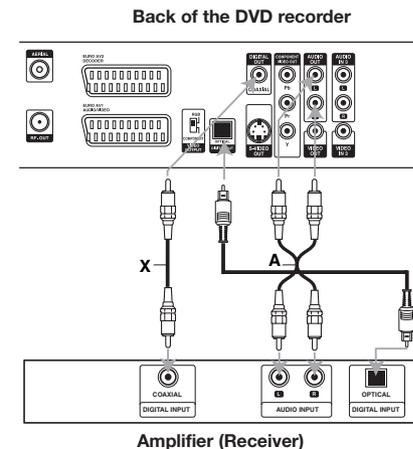
Digital Multi-Channel Sound

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.

Initial Installation

Notes:
- If the audio format of the digital output does not 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 (AV2, 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.)

Back of the DVD recorder   Front of the DVD recorder
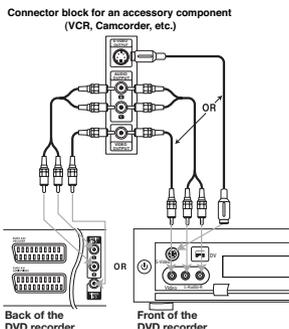
Connecting to a Digital Camcorder

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-/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 47 and 48). It is not compatible with digital satellite tuners or S-VHS video decks.

DV Digital Camcorder

S-Video   DV

Video L-Audio-R
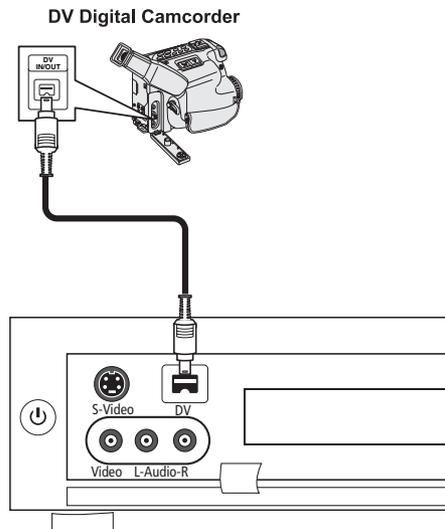
Basic Settings

Set the rotating switch on the remote contol 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	
	Program Edit	
	Clock Set	✔ **Automatic** ▶
	TV Aspect	Manual
	Display Mode	
	Decoder at AV1	Date [--] / [--]
	PBC	Year [- - - -]
	Factory Set	Time [--] : [--]
	Power Save Mode	

1st Level   2nd Level   3rd Level

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.

Activating Progressive Scan

With the "Progressive Scan" you get the highest possible picture quality without flickering in the "Component Video" mode (VIDEO OUTPUT switch on the back of Centros set to "COMPONENT") in display units which support this operating mode. If Centros is switched on: Press the PIXEL button on the device short. "576P" appears in the unit display, Centros is switched to Progressive Scan. By pressing the PIXEL button on the unit again, you can switch Centros back to the "Interlaced" mode (unit display shows "576 I").

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.

Auto Programming	Germany
Program Edit	
Clock Set	Stop
TV Aspect	
Display Mode	Searching 11%
Decoder at AV1	
PBC	
Factory Set	
Power Save Mode	
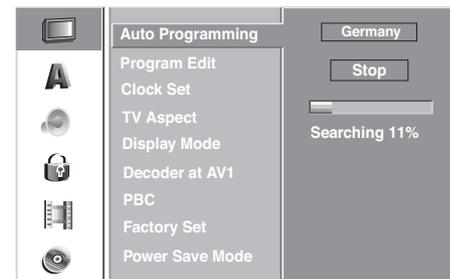
Digital Link Plus

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.

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.

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.

🖥	Auto Programming		Germany
A	Program Edit		Start Search
◉	Clock Set		
	TV Aspect		
🔒	Display Mode		
	Decoder at AV1		Start DLP
🎞	PBC		
	Factory Set		
◎	Power Save Mode		
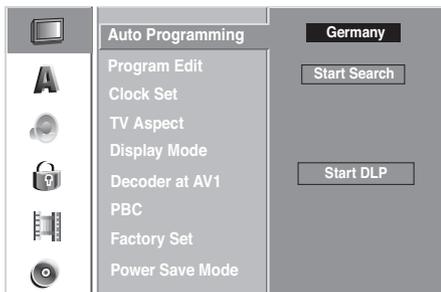
7. Press **OK** to start transferring the program list stored in the TV to the DVD recorder.
   This may take a few seconds. During the transfer the DVD recorder display shows "DLP".

Note: (Centros 2172). 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.).

🖥	Auto Programming		
A	Program Edit	▶	Edit
◉	Clock Set		
	TV Aspect		
🔒	Display Mode		
	Decoder at AV1		
🎞	PBC		
	Factory Set		
◎	Power Save Mode		
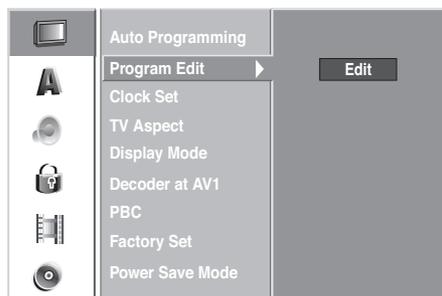
1. Press MENU. The menu is displayed.

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..

PR	Ch.	MFT	Station
01	C 12	0	ARD
02	C 23	0	ZDF
03	C 7	0	RTL
04	C 27	0	SAT1
05	C 17	0	PRO7
06	C 33	0	BBC
07	C 34	0	CNN
08	C 47	0	ABC
09	C 10	0	TV5
10			
11			

PR-01   Decoder   NICAM

◉ Select   ↕ Move   ◀◀ ▶▶ Page up/down   END Close
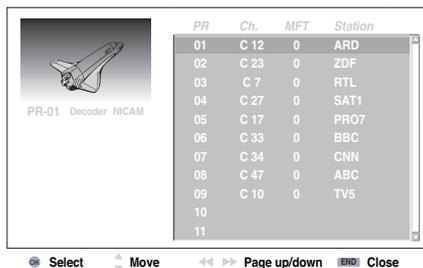
6. Use ▲ / ▼ to select a PR number, and press **OK**. All available options that can be used on the highlighted program are shown in the bottom left field. Use ▲ / ▼ to select an option,

and press **OK** to confirm.

Program edit
Station Rename
Move
Delete
Decoder on/off
NICAM auto/off
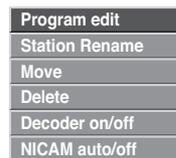
Program edit: Search, channel entry, fine tuning.
Station Rename: Change name.
Move: Move a program in the progam list.
Delete: Deleting programs from the program list
Decoder on/off: Divert program via decoder ("on").
NICAM auto/off: Switch off NICAM reception ("off")

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

Program edit

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.

PR	Seek	Ch.	MFT	PAL/SECAM	
07	⌃⌄	C 7	0	SECAM	OK

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

   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 2172): Changes the receiver standard. If there is interference with the image, use ◀ / ▶ to select the "PAL/SE-CAM" 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.

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.

```
ABC |
        ◀ Upper case letter ▶
  1  2  3  4  5  6  7  8  9  0
  A  B  C  D  E  F  G  H  I  J
  K  L  M  N  O  P  Q  R  S  T
  U  V  W  X  Y  Z  '  Æ  Ç  Đ
  `  °  ´  ¯  ¨  ˇ     Ø  Þ  «  »
    OK  Cancel  Space  Delete  ◀  ▶
```
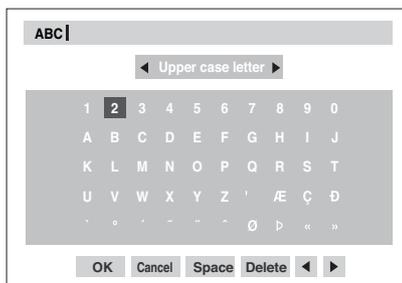
3. Enter a name for the station. Use ▲ ▼ ◀ ▶ to select a character and press **OK**.
- **Upper case letter**: Switches the keypad so that only upper case is used.
  Lower case letter: Switches the keypad so that only lower case is used.
- **Symbols**: Switches the keypad to symbol characters.

- **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 ▲ / ▼ 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 "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.
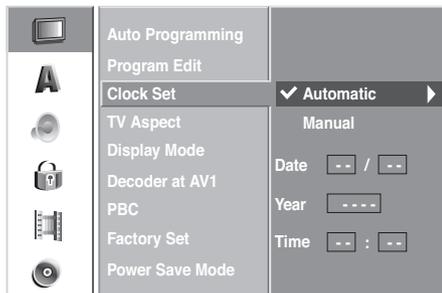
1. Press MENU.
   The menu is displayed.

2. Select the "General" option with ▲ / ▼ .

3. Press ▶ to call up the second level.

4. Select the "Clock" option with ▲ / ▼ .

5. Press ▶ to call up the third level.

6. Press ▲ / ▼ 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 ▲ / ▼ to select the "Manual" option and then press **OK**.
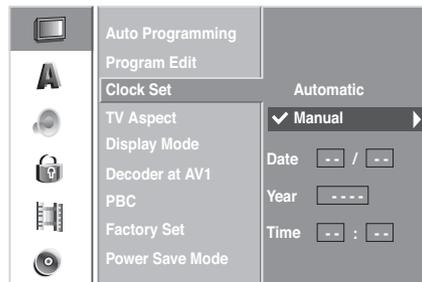
3. Then enter the necessary date and time information.
   ◀ / ▶ (left/right): Moves the cursor to the previous or next column/line.
   ▲ / ▼ (up/down): Changes the setting at the current cursor position.

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.
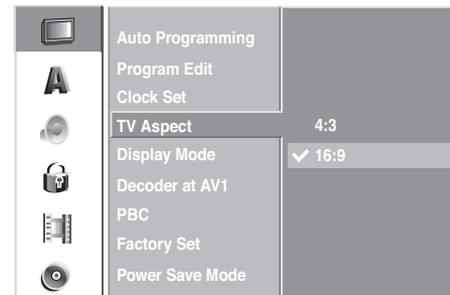
Initial Installation

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.

Auto Programming
Program Edit
Clock Set
TV Aspect
Display Mode   Letter Box
Decoder at AV1   ✓ Pan Scan
PBC
Factory Set
Power Save Mode
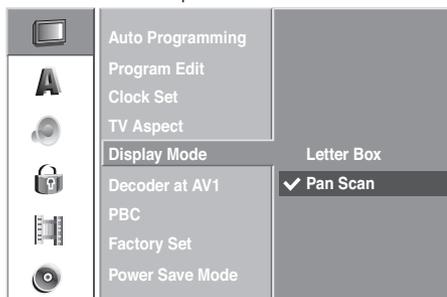
Decoder at AV1

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 "Decoder at AV1" to "On". If it is set to "Off" the decoder is only available to the DVD recorder.

Auto Programming
Program Edit
Clock Set
TV Aspect
Display Mode
Decoder at AV1   ✓ OFF
PBC   ON
Factory Set
Power Save Mode
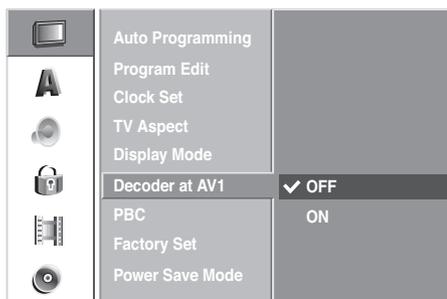
Playback Control - PBC

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.

Auto Programming
Program Edit
Clock Set
TV Aspect
Display Mode
Decoder at AV1
PBC   OFF
Factory Set   ✓ ON
Power Save Mode
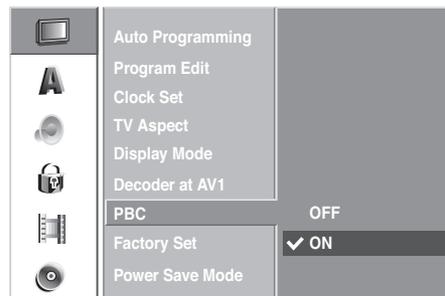
Factory Settings

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).

Auto Programming
Program Edit
Clock Set
TV Aspect
Display Mode
Decoder at AV1
PBC
Factory Set   Set
Power Save Mode
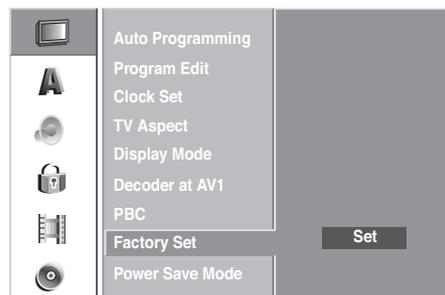
Power saving mode

You can set the recorder so that it consumes < 1 Watt on standby. In the "On" position the VPS Timer, the decoder signal transmission from AV2 to AV1 and "Digital Link Plus" is switched off (no recording from the TV possible).

Language Menu

Menu Language

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

Display Menu   ✓ English
Disc Menu   Deutsch
Disc Audio   Français
Disc Subtitle   Italiano
                      Español
                      Nederlands

Disc Languages

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

Display Menu   ✓ Original
Disc Menu   English
Disc Audio   German
Disc Subtitle   French
                      Italian
                      Spanish
                      Dutch
                      Portuguese
                      Swedish
                      Others - - - -
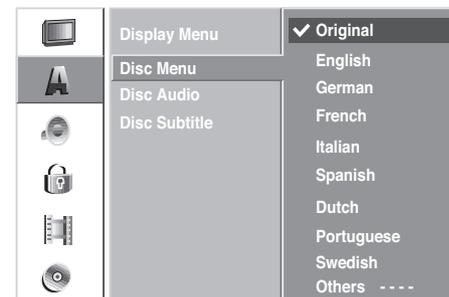
These are presettings and, if available, are set after inserting the disc. Otherwise the "Original" version of the disc is used.

- 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 65. If you input the code incorrectly, press

Initial Installation

◄ 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 / DTS / 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.

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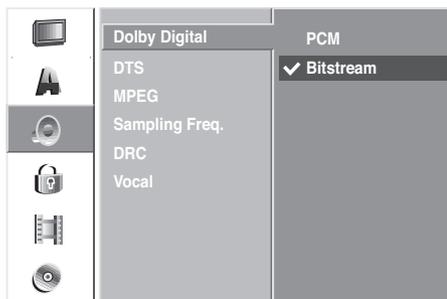
Sampling Frequency

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.
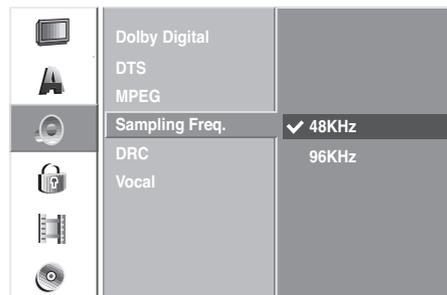
Night Mode

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".
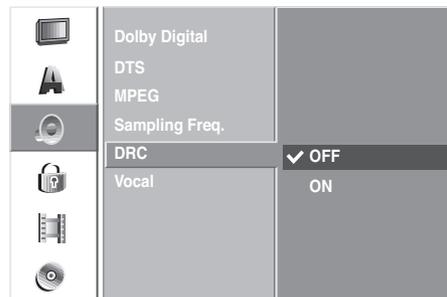
Karaoke Audio

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.
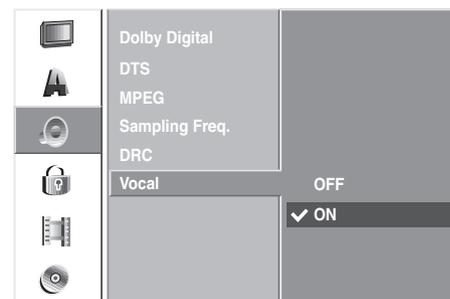
Lock Menu

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.

Password

Changing the 4-digit code
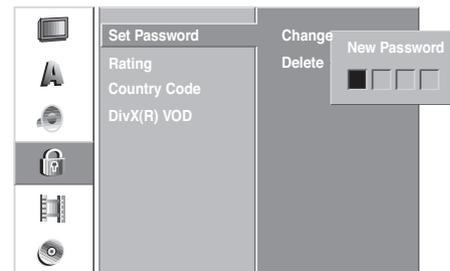
1. Press MENU. The menu is displayed.

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.

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 "OK" and press **OK**. The 4-digit password is deleted. Enter a new code as shown left.

Rating
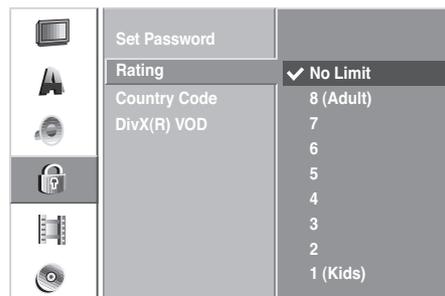
1. Follow steps 1 - 3 as described in "Password".

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 most playback limitations. "8" has the least playback limitations. **No Limits**: If you select "No Limits" the child 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 66.) For Great Britain select "G B".
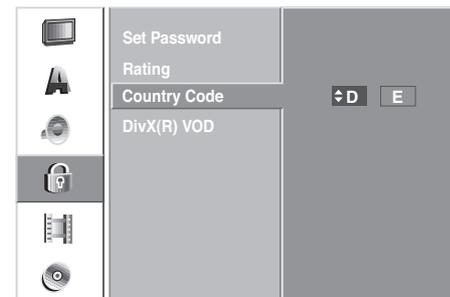
1. Press MENU.
   The MENU menu is displayed.

2. Select the "Lock" option with ▲ / ▼ .

3. The "Lock" entry is selected. Press ▶ to call up the second level.

4. Select the "Country Code" option with ▲ / ▼ .

5. Press ▶ 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 ▲ / ▼ keys.

8. Move the cursor using the ▶ key and select the second character with the ▲ / ▼ keys.

9. Press **OK** to confirm the selected country code. Press MENU to quit the menu.

Initial Installation

DivX registration code

DivX

You receive the DivX® VOD (Video On Demand) registration identification for hiring and purchasing films through the DivX® VOD-Service. Further information is available under www.divx.com/vod.

1. Select "DivX(R) VOD" and press ▶ .

2. Select "Code" and press **OK**. Then the "registration code" for your unit is displayed.

> Set Password
> Rating
>
> **DivX(R) Video On Demand**
> **Your registration code is : ZX3ZEDUS**
> **To learn more visit www.divx.com/vod**
>
> **OK**
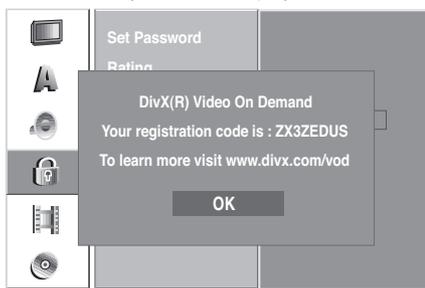
3. Your can hire or purchase films with this registration code through the DivX® VOD-Service under www.divx.com/vod.
See the instructions for saving the films on a disc for playing on this unit.

Note: All films bought from DivX® VOD can only be played on this unit.

Recording Menu

Recording Quality

You can set the picture quality for recording:
DVD+/-R/RW (4,7GB):
2 hours (SQ mode),
4 hours (LQ mode),
6 hours (EQ mode)
DVD+R DL (8,5GB):
Approx. 3 hours (HQ mode)
3:40 hours (SQ mode),
7:10 hours (LQ mode),
10:30 hours (EQ mode)

> Rec Mode Set — EQ
> Rec Aspect — LQ
> DV Rec Audio — ✓ SQ
> TV Rec Audio — HQ
> Auto Chapter
> Decoder at AV2
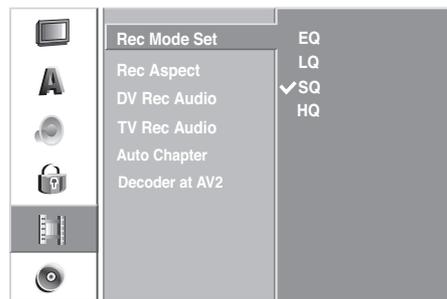
1. Press MENU.
   The menu is displayed.

2. Select the "Recording" option with ▲ / ▼ .

3. The "Recording" entry is selected. Press ▶ to call up the second level.

4. Select the "Rec Mode Set" option with ▲ / ▼ .

5. Press ▶ to move to the third level.

6. Use ▲ / ▼ 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.

Recording Format

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

> Rec Mode Set
> Rec Aspect — ✓ 4:3
> DV Rec Audio — 16:9
> TV Rec Audio
> Auto Chapter
> Decoder at AV2
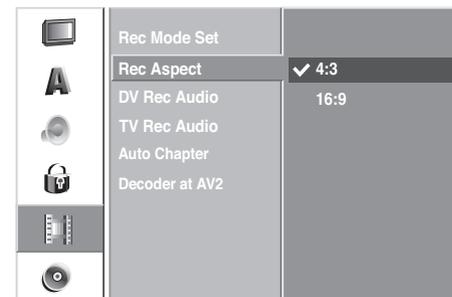
DV Audio

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.

> Rec Mode Set
> Rec Aspect
> DV Rec Audio — ✓ Audio 1
> TV Rec Audio — Audio 2
> Auto Chapter
> Decoder at AV2
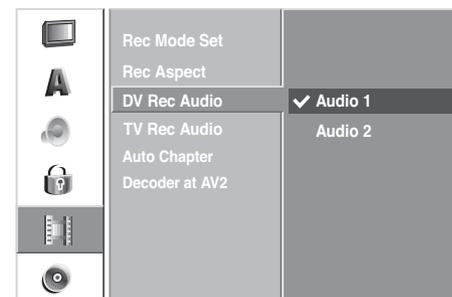
Initial Installation

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

	Rec Mode Set	
	Rec Aspect	
	DV Rec Audio	
	TV Rec Audio	✓ Sound 1+2
	Auto Chapter	Sound 1
	Decoder at AV2	Sound 2
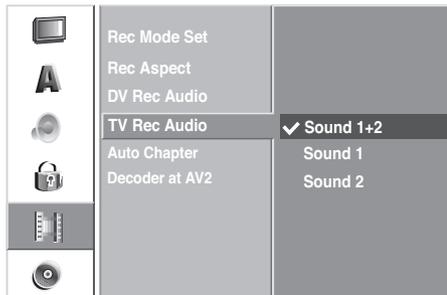
Automatic Chapter

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.

	Rec Mode Set	
	Rec Aspect	
	DV Rec Audio	
	TV Rec Audio	
	Auto Chapter	✓ None
	Decoder at AV2	All 5 Min.
		All 10 Min.
		All 15 Min.
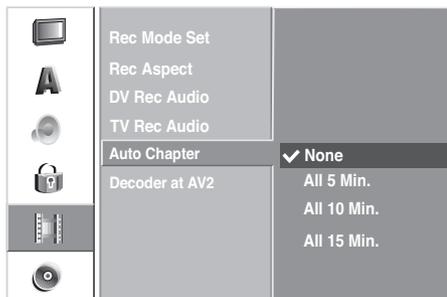
Decoder at AV2

If you want to use an analog decoder at AV2, you have to set "Decoder at AV2" to "On" (see also "Decoder at AV1" on page 21). If you want to use the AV2 socket as a normal AV interface, set "Decoder at AV2" to "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 initializes the disc in "Video Mode", "VR Mode" or as a "Data Disc".
DVD+R +R DL: The recorder formats the disc in Video mode.
DVD+RW: The recorder initializes the disc in "Video Mode" or as a "Data Disc".
A DVD+RW or DVD-RW disc can also be initialized later by menu:

	Disc Format	Start
	Finalise	
	Disc Label	
	Disc Protect	
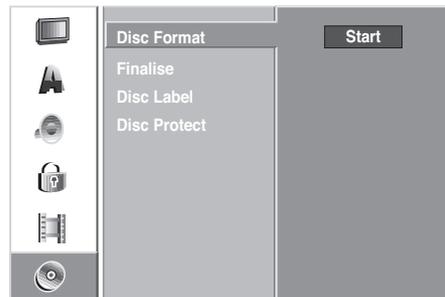
1. Press MENU.
   The menu is displayed.

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**.

Disc Format		
Select a Mode.		
Video Mode	VR Mode	Data Disc
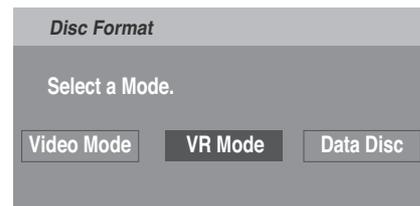
8. Use ◀ / ▶ to select "Ok", and press **OK**.

9. The following prompt appears:

Disc Format	
All Data on the disc will be deleted.	
OK	Cancel
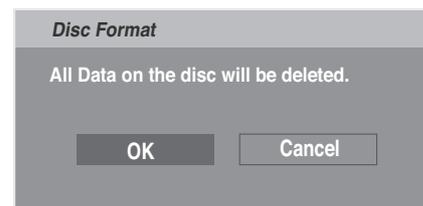
Caution: When you start formatting all recordings on the disc are deleted.

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.

Initial Installation
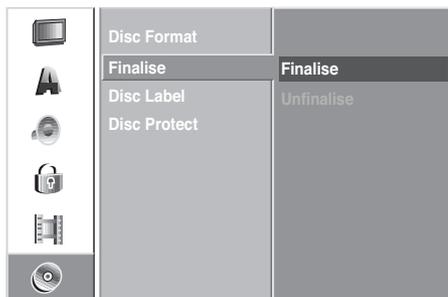
1. Follow steps 1 - 3 described on page 25 (Formatting).

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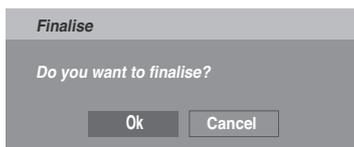
5. Press **OK**. The recorder starts finalization of the disc.

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.
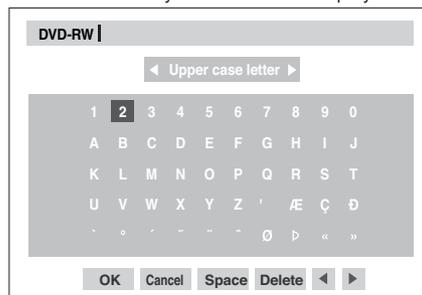
5. Enter a name for the disc. Use ▲ ▼ ◀ ▶ to select a character. Then press **OK** to use the character in the name.
See step 3 on page 19 (Renaming a Station).

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.

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".
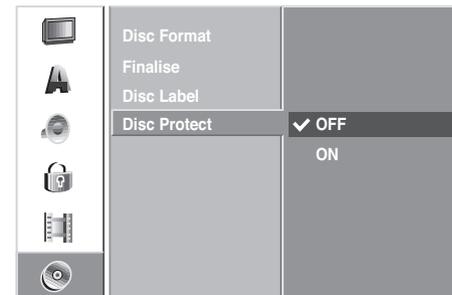
Additional Screen Menus

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.

Initial Installation

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 INFO . 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.

DVD-RW		PR-06
VR Mode	SQ 1H 32M Free	N STEREO
		ABC
		28/8/2005 11:35
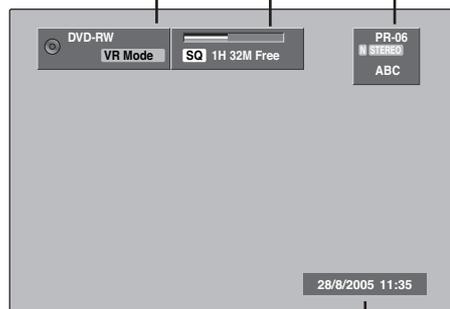
Indicates the current date and time.

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 INFO twice to show disc information whose parameters can be changed.

2. To hide the screen display again, press INFO or END .
   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

Indicates the elapsed time and the total time.

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

1x INFO — Indicates the current title/chapter number and the total number of titles/chapters.

| 🎬 **Title: 1/4** **Chapter: 3/28** | ▭ 0:06:32 / 2:12:10 |

▶ — Indicates the current drive mode.

Menu Options		Function (Use ▲ / ▼ to select the desired option)	Selection Methods
2x INFO			
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. ENG ► DD D 5.1CH	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.	◄ / ►
Camera	📹 ◄ 1/3 ►	Indicates the current selected camera position / total number of cameras and changes the camera position.	◄ / ►
Sound	🔊 ◄ NORMAL ►	Indicates the current audio mode and changes the settings.	◄ / ►

VCD, SCVCD

Indicates the elapsed time and the total time.

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

1x INFO — Indicates the current track number and the total number of tracks or the PBC mode.

| 🎬 **Track : 1/17** | ▭ 0:06:32 / 1:00:00 |

▶ — Indicates the current drive mode.

Menu Options		Function (Use ▲ / ▼ to select the desired option)	Selection Methods
2x INFO			
Track	◉ ◄ 1/4 ►	Indicates the current track number / total number of tracks and skips to the desired track number or indicates that the PBC mode is active, if it is set to "On" in the main menu.	◄ / ► or numbers, **OK**
Time	🕐 0:10:30	Indicates the elapsed playback time and forwards the film to the desired point.	–
Audio	🎧 ◄ STEREO ►	Indicates the audio format and changes the settings.	◄ / ►
Sound	🔊 ◄ NORMAL ►	Indicates the current film language and the current audio format and changes these settings.	◄ / ►

Initial Installation

Displayi of disc Information during playback with ▶ **on the Screen (Continued)**

DVD-VR

1x INFO

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.

TITLE 12
02/20 **ORG SQ** **0:06:32 / 2:12:10**

▶

Indicates the current drive mode.

2x INFO

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 DD 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.	◀ / ▶

HDMI mode

HDMI (DVI) connection

HD ready

The HDMI connection (High Definition Multimedia Interface) allows digital picture and sound transmission via a connecting cable, e.g. to Loewe Flat TV sets. The digital picture and sound data are transmitted without data compression and therefore lose none of their quality. In the equipment connected, no analogue/digital conversion is necessary, which might also have lead to losses in quality.

DVI signals can be also be reproduced by the HDMI connection using a DVI/HDMI adapter cable. This is possible because HDMI is based on DVI and is downwardly compatible. That means that the digital video signals are transmitted via HDMI - no audio signals are transmitted, though. In addition, both use the same copy protection method HDCP. (High Definition Content Protection).

1. Switch the TV set or monitor with HDMI connection and the recorder off.

2. Connect the DVD recorder to a TV set or monitor with HDMI connection as described on page 14.

3. Then switch on the TV set or monitor, wait 30 seconds and then switch on the recorder.

4. Log in the HDMI connection in the TV set's connection wizard (see TV set user guide).

5. If transmission takes place on a DVI/HDMI adapter cable, connect the analogue or digital audio outputs of Centros to the appropriate inputs of the TV set as described on page 15/16.

6. Leave the existing SCART connection as it is to record from the TV.

HDMI operation

1. Switch over the TV set to the HDMI AV input (happens automatically in connection with a Loewe Flat TV set).

2. Press the **HDMI** button on the front of Centros to switch over to digital video output.

3. Set the desired resolution on the front of Centros with the **Pixel** button. Press the **Pixel** button repeatedly to set the desired picture resolution (e.g. 576i, 576p, 720p, 1080i).
Note: You can only set resolutions within the scope of your TV's capabilities. Select resolution 720p on Centros for optimum picture quality.

4. Press at Centros ⏏ to open the disk drawer.

5. Load the selected disk in the drawer with the side to be played facing down.

6. Press at Centros ⏏ to close the disk drawer.

7. Playing starts either automatically or by pressing ▶ or you have to make entries in the menu depending on the medium.

Notes:

1. The other sockets (VIDEO OUT, S-Video and Component Video) have no function during the HDMI mode.

2. With an HDMI connection the audio scanning frequency is only 48 kHz, even when selecting 96 kHz.

3. This recorder performs no internal (2-channel) decoding of DTS soundtracks.
In order to enjoy DTS multi-channel surround sound, this recorder must be connected by one of the digital audio outputs to a DTS-compatible receiver.

4. If the "Dolby Digital" or "MPEG" option has not been set to "PCM" in the Setup menu (see page 22), no sound is output over the HDMI cable.

5. The HDMI connection to Centros is operated as a signal output. Please proceed as described on page 47 if you want to record from an external signal source with Centros.

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 Centros 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 Centros 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
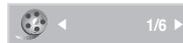
DVD-V Video VR DivX
If there is more than one title on a disc, you can switch to a different title as follows:

Press INFO 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-V Video VR VCD DivX
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 INFO 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.

Searching

DVD-V DCVD-A Video VR VCD DivX
1. Press ◀◀ or ▶▶ during playback for > 3 seconds. The recorder now changes to Searching mode.
   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 .
2. You can leave Search mode by pressing ▶ .

Freeze-frame and Picture For Picture playback

DVD-V Video VR VCD DivX
During playback, press ⏸ .
The recorder now switches to PAUSE mode.
1. You can page backwards and forwards between images by pressing ◀ / ▶ repeatedly.
2. You can leave PAUSE mode by pressing ▶ .

Notes: The picture by picture scroll back is not supported by Video-CDs and in DivX. You can page forward through images by pressing ⏸ on the remote control.

Using DVDs and Video CDs

Slow motion

DVD-V Video VR VCD DivX

1. During playback, press ⏸.
   The recorder now switches to PAUSE mode.
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(DivX).
4. You can leave Slow Motion mode by pressing ▶.

Note: Video-CD and DivX mode do not support reverse slow motion playback.

Repeating

Chapter

DVD-V 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/DivX - repeat track/all/OFF
Press 🔊 to select the repeat mode that you want.
- **Track**: repeats the current track.
- **All**: Repeats all tracks on the disk or in the folder (DivX).
- **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 ...)

◐ **0:10:30**
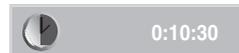
DVD-V DVD-A Video VR DivX
The "Time" function enables you to select the time that the disc begins to play.

1. During playback, press INFO 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.

Zoom

DVD-V 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

⚑ **1/6**
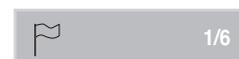
DVD-V Video VR VCD

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.

⚑ *Marker Search*

↔ **Select**   OK **View**   MENÜ **Delete**   END **Close**
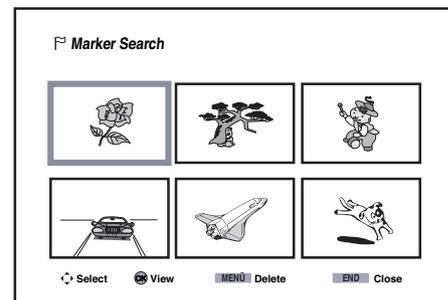
Using DVDs and Video CDs

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.

Note: The marks are only saved until the disc is changed.

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-V

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).

Camera positions

◀ 1/3 ▶

DVD-V

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

◀ 1. ENG ▶
DD D 5.1CH

DVD-V DVD-A DivX

Here you can select the digital sound format in connection with the film language. To do this, press INFO 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
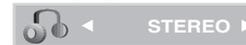
◀ STEREO ▶

VCD Video VR

If have inserted a video CD, press INFO 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

◀ NORMAL ▶

DVD-V DVD-A Video VR VCD DivX

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.

1. Press INFO 2x and use ▲ / ▼ to select the "Sound" menu item. Then press ◀ / ▶ during playback to select "3D SUR".
2. Select "NORMAL" to switch off the 3D surround sound effect.

Subtitles

◀ OFF ▶

DVD-V Video VR DivX

During playback, press INFO 2x and use ▲ / ▼ to select the "Subtitles" menu item. Then press ◀ / ▶ to select the subtitle language on the DVD.

Using DVDs and Video CDs

DVD-Audio Disks

DVD-Audio is a new disk format based on the success of the DVD video and also improves the quality and functionality in the audio field. Multichannel audio provides a new music listening experience. The stereo quality surpasses that of Audio-CDs (192kHz in comparison with 44.1 kHz for CDs; 24 Bit Sampling Rate instead of 16 Bit for CDs).

A typical DVD-Audio Disk contains up to seven times the capacity of an Audio-CD. The additional space is used either for multichannel recordings or for longer music recording times. Many DVD-Audio Disks also contain screen texts such as background information about the artist, song lyrics, biographies etc.. Some also contain photo galleries or video clips.

Since the contents of the DVD-Audio Disks differ, various menus and functions described below may not be available.

Switch title

> [icon] ◄ 1/2 ►

DVD-A
Some DVD-Audio Disks divide the contents into different titles. Centros allows you to switch back and forth comfortably between the individual titles with the menu.

1. Press *INFO* twice during playback.
2. Select with ▲ / ▼ the menu item "Title".
3. Then press ◄ / ▶ or button 0 − 9 to select a specific title.

Note: On some DVD-Audio Disks, the manufacturer has protected certain contents by a password. Enter the password when the icon ⃠ appears on the screen (you may find it on the disk sleeve or in the Internet). This password protection is not determined by the DVD recorder but is a function of the disk.

Switch chapter

> [icon] ◄ 1/21 ►

DVD-A
Proceed as follows to select one of the contents on a DVD-Audio Disk.
1. Press *INFO* twice during playback.
2. Select with ▲ / ▼ the menu item "Chapter".
3. Then press ◄ / ▶ to select a certain chapter.

Storing the last disc settings

DVD-V 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-V Video VR VCD
This function enables you, during playback, to watch television programmes or images from other connected AV sources in a small picture.
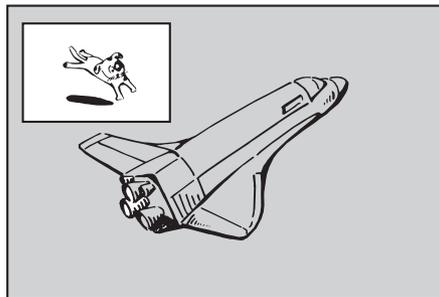
PIP on / off
Press ❰ # PIP ❱ to switch the small picture on. Press this button again to switch it back off.
Selecting the small picture

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.

Playing disks with mixed contents

If data disks contain files of different playable formats such as MP3, JPG and DivX, you can switch between the three playback modes "Film", "Music" and "Photo" with the yellow **TITLE** button:
- See the chapter "DivX mode" on page 35 to find out how to use the "Film" mode.
- See the chapter "Audio-CD and MP3/WMA mode" on page 36 for operation of the "Music" mode.
- See the chapter "Photo Disk mode" on page 39 to find out how to use the "Photo" mode.

DivX mode

With this DVD recorder you can play DivX files saved on CD-R/RW or DVD±R/RW media.

Note: Before playing DivX files, please read the notes "About DivX Video files" on this page.

Playing DivX files

1. Press the button ⏏ the unit to open the disk drawer. Load the disk and press again ⏏.

2. The disk is read in and the DivX menu appears on the screen after a short while.

Movie - DVD		
DIVX		3 Items
🗁 ..		
🗀 **MOVIE 1.avi**		
🗀 MOVIE 2.avi		
🗀 MOVIE 3.avi		
🌐 Select		**TITLE** MP3
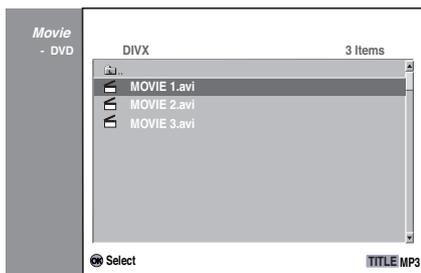
3. Select a file or folder with ▲ ▼ and press **OK**. The contents of the selected folder are displayed. To return to the master folder from the file list, press ▲ / ▼ on the remote control to select the 🗁.. icon and then press **OK**.

4. Select a file with ▲ ▼ and press 2x **OK** to play or ▶ .

5. Press **P+** or **P-** briefly during playback to activate the next file or to return to the beginning of the current file.

6. Press **P-** twice briefly to return to the previous file.

7. To stop playback at any time, press ■ .

8. If the disk has a mixed contents (MP3/WMA, JPEG and DivX files) you can switch between the modes "Movie", "Music" and "Photo" by pressing the yellow **TITLE** button.

9. Press END , to quit the DivX menu.

10. See page 31 onwards for other operating functions.

DivX subtitles

Please proceed as follows if subtitles are not displayed correctly.

1. Set a suitable subtitle language for the DivX subtitles according to the following table.

Disk Subtitle Language	Available DivX subtitles
Original, English	English
French, German, Italian, Dutch, Spanish, Swedish, Portuguese	French, German, Italian, Dutch, Spanish, Swedish, Portuguese
Russian	Russian
Others 6976	Greek
Others 7665	Polish, Hungarian, Czech
Others 8482	Turkish

2. Press "MENU" ➜ "MENU LANGUAGE" ➜ "Disk Subtitles" and select the desired language for subtitles.

3. To select the correct character set for the subtitles, press the red button **C-SET** for 3 seconds during DivX playback and then select the desired character set with ◀ ▶ .

About DivX Video files

This recorder is compatible with the following DivX formats:

- The maximum picture resolution of the DivX file is less than or equal 720 x 576 (H x V) pixels.
- The filename of the DivX file has a maximum of 47 characters.
- Characters in DivX filenames which cannot be displayed are shown as "_".
- The unit can not correctly play image refresh rates of > 30 images per second.
- If the sound and picture are out of sync, either the sound or the picture is played.
- This recorder does not support the "GMC" DivX/Xvid function.
- Valid DivX file extensions for videos are: ".avi", ".divx".
- Valid DivX file extensions for subtitles are: ".smi", ".srt", ".sub" (only Micro DVD, Subviewer 1-2 formats), ".txt" (only Micro DVD, T1-4 formats). Other subtitles cannot be displayed.
- Valid DivX Codec formats: "DivX3.xx", "DivX4.xx", "DivX5.xx", "XVID", "3IVX".
- Valid DivX Audio formats: "Dolby Digital" (AC3), "PCM", "MP2", "MP3", "DTS (only at DIGITAL OUT)", "WAV".
- MP3 sampling rates: 8 - 48 kHz.
- WMA sampling rates: 32 - 48 kHz.
- MP3 bit rates: 32 - 320 kbps.
- WMA bit rates: 32 - 192 kbps.

Operating the Audio CD and MP3/WMA

Playing audio CDs or MP3/WMA discs

CD MP3 WMA

The DVD recorder can be used to play audio CDs. Recordings made in the MP3/WMA format can also be played back on CD-ROM, CD-R or CD-RW discs (before playing MP3/WMA recordings, read the advice on MP3/WMA recordings on page 37).

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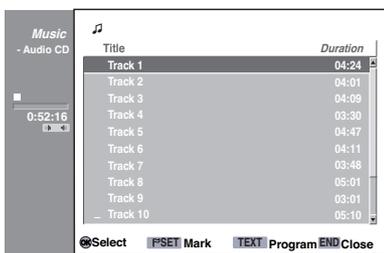
AUDIO CD Menu
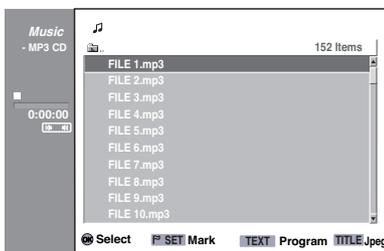
MP3 CD Menu

2. Use ▲ / ▼ to select a track, and press ▶ . 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.) Use the **DISC-M/** 🄣 button to return to the CD menu.
b.) You can switch between the programme list and the original list by pressing 🄣 (see page 38).

Press ◀◀ or ▶▶ to switch to the previous/next list page.
c.) With mixed CDs (Audio tracks, MP3/WMA and JPEG files) you can switch between the "Audio CD", "MP3 CD" and "Photo CD" menus by repeatedly pressing **TITLE** ▱ when in Stop mode.

3. 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 then always press **OK** to execute the function.

Options in the Music-Audio CD menu
CD
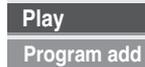
> **Play**
> **Program add**

- **Play:** Starts playing the selected track.
- **Program add:** Adds the selected track to the programme list. (Page 38)

Options in the Music-MP3/WMA 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/WMA files on the disc (no folders).
- **Copy**: Copies the selected tracks to the memory card.

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 38).
- **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/WMA files on the disc (no folders).
- **Copy:** Copies the selected folders to the memory card.

Pause

CD MP3 WMA

1. During playback, press ❙❙ .

2. To continue playback, press ▶ or ❙❙ to replay.

Playing a different TRACK

CD MP3 WMA
- During playback, press ◀◀ or ▶▶ once to go to the next track or to go back to the start of the current track.
- Press ◀◀ 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/WMA

Repeat

CD MP3 WMA

Press ⬚◁▭ for the Repeat type that you want.
- **TRACK**: repeats the current track.
- **ALL** (CD): repeats all the tracks on the CD.
- **FOLDER** (MP3/WMA): 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/WMA recording

About MP3/WMA

- MP3/WMA sampling rates: 8 - 48 kHz
- MP3 bit rates: 32 - 320 kbps.
- WMA bit rates: 32 - 192kbps.
- 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".
- A WMA file (Windows Media Audio) consists of data which have been compressed with the Windows Media Codec.
- The filenames must have the extension "mp3" or ".wma".

The compatibility of MP3/WMA 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/WMA files with software such as "Direct CD", which cannot create a FILE SYSTEM, you cannot play back MP3/WMA 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/WMA 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/WMA 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/WMA and photo files can be copied from a CD/DVD 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/DVD and then press **OK**.
   In the menu which then opens (if a card is plugged in both slots, select a memory card with ▲ / ▼ first and then.) select the "Copy" item with ▲ / ▼ and press **OK**.

Play
Program add
Folder
Titles only
Copy
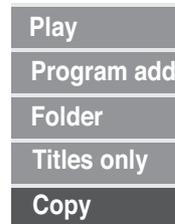
2. The "Copy" menu is displayed.

Copy
Select the memory
▲
▣ Card left	**Copy**
▣ Card right	**Cancel**
	New album
▼
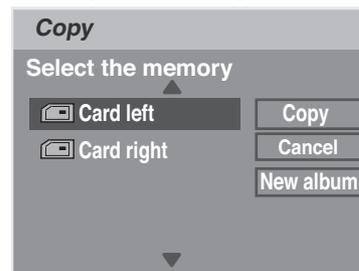
3. Use ▲ / ▼ to select the folder on the memory card that will receive the copy, and then press ▶ .

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.

Note: When copying from CD/DVD to memory cards, the filenames are abbreviated to 8 characters.

Operating the Audio CD and MP3/WMA

Programmed replay

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/WMA).

1. Insert an audio CD or an MP3/WMA 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 〈TEXT〉 to display this in the "Programme list" menu (the 〈TEXT〉 button switches between the programme list and the original list).


```
Music          ♫
- Audio CD     Title              Duration
               Track 1            04:24
        ■      Track 2            04:01
               Track 3            04:09
   0:52:16     Track 4            03:30
    ▶◀         Track 5            04:47
               Track 6            04:11
               Track 7            03:48
               Track 8            05:01
               Track 9            03:01
             _ Track 10           05:10
   ⊕Select    P°SET Mark   TEXT Program END Close
```
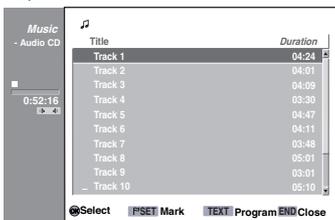
7. Use ▲ / ▼ to select the programme track that is to be the first one to be played.
Note: With programme lists of more than one page, you can use (◀◀) or (▶▶) to page backwards and forwards.

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 WMA

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
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/WMA 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/WMA): 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.

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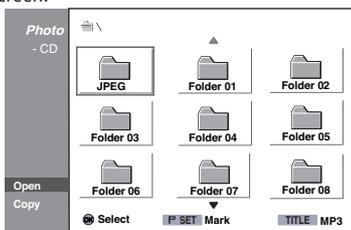
2. Use ▲ ▼ ◀ ▶ to select a folder, and then press **OK**. The left half of the menu displays the options that you can use on the selected item. Select a JPEG file and press **OK**, then continue from Point 6.

   Note: If the preview picture is displayed in black, this JPEG file cannot be shown.

3. Use ▲ ▼ ◀ ▶ to select the "Open" option, and press **OK**.

4. The contents of the selected folder are displayed.
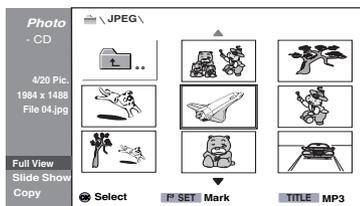
5. The options are displayed in the left half of the menu.

   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.) Press ◀◀ or ▶▶ in the photo menu to switch to the previous or next page.
c.) With mixed CDs (audio tracks, MP3/WMA and JPEG files), when you are in Stop mode you can switch between the AUDIO CD, MP3/WMA CD and Photo CD 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**.
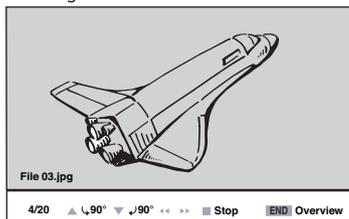
7. Return to the overview using ■.

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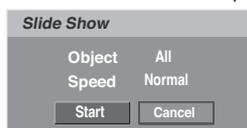
2. Press **OK**.
   The "Slide show" menu is displayed.

3. Use ▲ ▼ ◀ ▶ to select the options.
   Item: display selected files or all files (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 5 Megapixels (2760x2048 Pixel) 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" extension before they will be burned onto the CD.

If the files have the extension ".jpe" or ".jpeg" they must be renamed ".jpg".
This recorder cannot read file names without the ".jpg" extension, even if the files appear as JPEG images in Windows Explorer.

Using the Music/Photo/Movie card reader

Overview

About the system

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

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

Movies in DivX format can be played (see page 35). You use the Loewe DVD recorder's remote control to operate the Music/Photo/Movie card reader.

When the memory card is inserted, you can use the **CARD** button to switch to using the Music/Photo/Movie card reader. Then a list of the pictures, movies or audio files stored on the card appears depending on the content of the memory card.

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 39).

DivX, MP3/WMA or JPEG files can be copied from a data CD/DVD to a memory card with enough free storage space, so that they can be played on, e.g., portable playback devices (see page 38).

Conversely, you can copy files from a memory card to a data DVD with sufficient disk space.

Data/memory card compatibility

The images stored on the card must be in the JPEG baseline DCF format. Other formats are not displayed and are shown black in the list. There is a maximum of 5 Megapixels. For further details about JPEG files, refer to page 39.
MP3/WMA files are played at 32 - 320 kBps bit rates and at variable bit rates.
You will find information about the compatibility of movie files on page 35.
The memory card must be formatted in format FAT 12, 16 or 32. Memory cards with other formats cannot be read.

Formats of the memory cards

Compact Flash (CF)	left card slot
Micro Drive (MD)	left card slot
Memory Stick (MS)	right card slot
Memory Stick Pro	right card slot
MultiMediaCard (MMC)	right card slot
Secure Digital (SD)	right card slot
SmartMedia Card (SMC)	right card slot
xD-Picture Card (xD)	right card slot

To avoid compatibility problems, only use high quality memory cards from brand name manufacturers.

Maximum memory capacity

Compact Flash (CF)	4 GB
Micro Drive (MD)	5 GB
Memory Stick (MS)	128 MB
Memory Stick Pro	1 GB
MultiMediaCard (MMC)	1 GB
Secure Digital (SD)	1 GB
SmartMedia Card (SMC)	128 MB
xD-Picture Card (xD)	512 MB

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.
• Only one card at a time may be plugged into the right hand memory card slot.
• Memory cards cannot be formatted by Centros.
• The reading time of the memory card depends on the number of files, the file size or resolution.
• If a folder on the memory card contains more than 645 files, not all the files can be played.
• The card in the right hand slot has priority when cards are inserted in both memory card slots. To activate the card in the left hand memory slot, remove the card from the right hand slot.

Inserting/removing memory cards

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

left memory card slot   right memory card slot
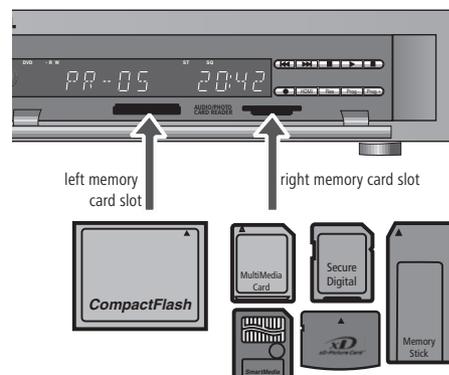
Inserting a memory card: Push the card in until it snaps into place.
Removing a memory card: Carefully withdraw the card.

Using the Music/Photo/Movie card reader

RC3 remote control Music/Photo/Movie card reader functions

MP3/WMA/Movie operation: muting

Highlights selection

Changes signal source

Audio/Photo/Movie Card Reader operation off and main menu on

MP3/WMA operation:
Changes between MP3/WMA original list / playlist

Photo operation during playback:
rotates picture left / right
/ in menu: selects up/down

MP3/WMA/Movie operation during playback:
press once: to the start of the current track
press repeatedly: previous tracks

Audio/Photo/Movie Card Reader operation off
and ShowView menu on

Scrolls backwards in list /
Photo operation during playback: previous picture

MP3/WMA/Movie operation: starts playback

Audio/Photo/Movie Card Reader operation off
/ back to menu

Info menu

MP3/WMA/Movie operation during playback: next track

Performs function / Starts playback
Photo operation in menu:
selects or sets right/left

MP3/WMA/Movie operation: volume - / +

Audio/Photo/Movie Card Reader operation on/off

Changes between Movie / MP3/WMA / Photo operation

Scrolls forwards in list /
Photo operation during playback: next picture

Ends playback
/ back to menu

Pause

Using the Music/Photo/Movie card reader

Photo mode

Displaying image files

Please also read "Notes on JPEG files" on page 39 before playing picture files.

1. Press the blue button **CARD** to switch to memory card operation and then the yellow button **TITLE** until the menu displays "Photo Card".

```
Photo      \
- Card
            ▲
        [JPEG]   [Folder 01]  [Folder 02]

        [Folder 03]  [Folder 04]  [Folder 05]
Open
Copy    [Folder 06]  [Folder 07]  [Folder 08]
Delete
            ▼
       Select    SET Mark    TITLE Movie
```
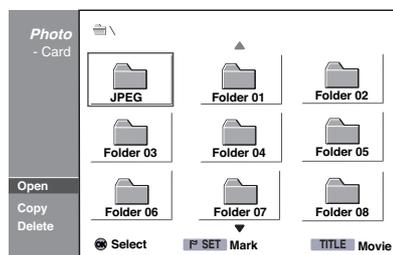
2. The rest of the operating functions are identical with those on CD/DVD - see "Photo Disc Operation" on page 39.

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.

```
     Delete selected files?
      Yes          No
```
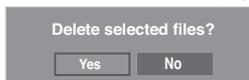
3. Select "Yes" if you want to permanently delete the selected folders/files, and press **OK**. The delete procedure on the memory card cannot be reversed.

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

Movies operation

Playing movies

Please also read the information "About DivX movie files" on page 35 before playing movie files.

1. Press the blue button **CARD** to switch to memory card operation and then the yellow button **TITLE** until the menu displays "Movie Card".

```
Movie            DIVX              3 Items
- Card
                 ..
                 MOVIE 1.avi
                 MOVIE 2.avi
                 MOVIE 3.avi


       Select                     TITLE MP3
```
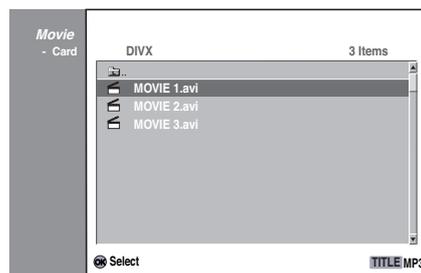
2. The rest of the operating functions are identical with those on CD/DVD - see "DivX mode" on page 31/35.

Music mode

Playing music files

Before playing MP3/WMA recordings, read the notes regarding MP3/WMA recordings on page 37.

1. Press the blue button **CARD** to switch to memory card operation and then the yellow button **TITLE** until the menu displays „Music-MP3 card".

```
Music     ♪                       2 Items
- MP3 Card  \
          📁 Folder1
          📁 Folder2

0:00:00

Open
Program add
Delete
Copy
       Select   SET Mark   TEXT Program TITLE Jpeg
```
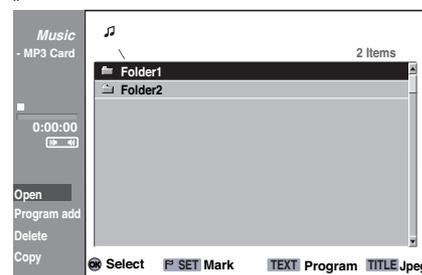
2. Use ▲ ▼ ◄ ► to select a folder or file, and press **OK**.
   The menu options are displayed on the left.
   If you have selected a folder and pressed **OK**, select the "Open" option from the menu and press **OK**.

```
Music     ♪
- MP3 Card                       152 Items
          FILE 1.mp3
          FILE 2.mp3
          FILE 3.mp3
0:00:00    FILE 4.mp3
          FILE 5.mp3
          FILE 6.mp3
          FILE 7.mp3
          FILE 8.mp3
          FILE 9.mp3
          FILE 10.mp3
       Select   SET Mark   TEXT Program TITLE Jpeg
```
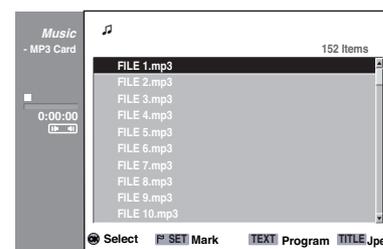
3. Use ▲ / ▼ to select a file and press ▶ or press **OK,** then select „Play" from the menu options that appear, and press **OK** again. Playback begins. During playback, the amount of time that has elapsed of the current track is displayed in the menu. When the list comes to an end, playback will stop.
   You can press **DISC-M**/TEXT to toggle between the original list and the programme list.
   Press ◄◄ or ►► in the "Music-MP3

Using the Music/Photo/Movie card reader

card" menu to switch to the previous/next page. If the contents of the memory card are mixed (DivX files, MP3/WMA and JPEG files) you can switch between the menus "Movie Card", "Music MP3 Card" and "Photo Card" in the Stop mode by pressing the yellow **TITLE** ⬜ button several times.

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/WMA card menu

When a file is selected:
• **Play**: Starts playing the selected file.
• **Program add**: Adds files to the programme list (page 37).
• **Folder:** Displays the disc's folder list.
• **Titles only:** Displays all the MP3/WMA files on the disc (no folders).
• **Delete**: Deletes the selected file.

When a folder is selected:
• **Open**: Displays a subfolder and all MP3 files in this folder.
• **Program add**: Adds all the files in the folder to the list. (see page 38)
• **Folder:** Displays the disc's folder list if "Title only" had previously been chosen to display only the files.
• **Titles only:** Displays all the MP3/WMA files on the disc (no folders).
• **Delete**: Deletes the selected folder and its contents.
• **Copy**: Copy data to DVD.

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.

Copying data to DVD

The files that can be played by Centros can be copied from a memory card in the Audio/Photo/Movie Card Reader to a writable DVD in the "Data Disc" format (see "Initialisation" on page 25) or to a memory card in the second memory slot. This is useful for example for archiving the files on memory cards.

1. Select with ▲ / ▼ a file / a folder on the memory card and press **OK**.
Mark several files/folders with 🕐 .
Select the "Copy" item in the menu that opens with ▲ / ▼ and press **OK**.

2. The "Copy" menu appears.

Copy
Select the memory
▲
⊙ DVD+RW	Copy
⬜ Card left	Cancel
	New album
▼
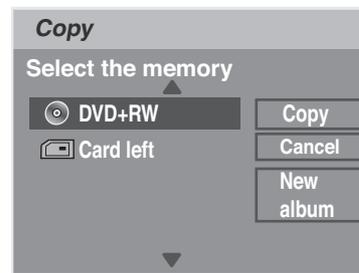
3. With ▲ / ▼ you can first "select the memory" if necessary and then press **OK**.
With ▲ / ▼ you can "select the album" if necessary and then press **OK**. .

4. Select with ▶ "Copy" and press **OK**. The selected files / folders are copied into the selected album on the DVD/card.
You return to the start menu with "Cancel".
With "New album" a new folder is created first on the target medium. You can then copy the selected files / folders to this.

Recording

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. If you insert an empty disc, the recorder will initialise it automatically first (see page 25).

2. Set the recording quality if necessary (see page 24).

3. Switch the recorder input to the signal source you wish to record from with the numeric buttons, the buttons **P+** / **P-** or the button **DVD-AV/**⟨TEXT⟩ or ⟨ 0 AV ⟩.
   The program number, name and current sound status are displayed on the screen.
   • Select the audio channel for two language TV recordings in the sub-menu "Recording - TV sound" of the menu (see page 25).
   • This recorder can also record NICAM. If the NICAM setting is set (see page 20) to Auto, Audio is automatically changed to NICAM as soon as a NICAM broadcast is transmitted. If the NICAM sound is distorted due to poor reception, you can switch off the program's NICAM setting.

4. Press ⟨●⟩ once.
   Recording will begin. (The **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 ⟨ II ⟩ to stop the disc during a recording.

2. If you wish to continue the recording, press ⟨ II ⟩.

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.
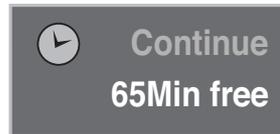
"Immediate Timer Recording" message.

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 complete recording will be lost.

Recording

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.

Timer-Record						SD 196Min. Free
PR	*Date*	*Start Time*	*Length*	*Mode*	*Repeat*	*VPS/PDC*
▲ 02 ▼	9/5 Tu	19:20	- - - -	SQ	Once	Off
C7 BBC						
⊙ Enter		REC-MENU Timer Record List			END Close	

- **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).
- The energy saving function of Centros must be switched off (see page 21).

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 icon 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!

Recording

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.

   ShowView

   Number   Repeat
   ⬛ ⬛ ⬛ ⬛ ⬛ ⬛ ⬛ ⬛   Once

   0-9 Input   ⬅Enter   MENU Delete   END Close
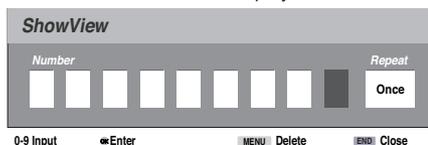
   To close the menu, press **SV** again ⬛️.
   Input fields
   - Number – key in the ShowView code number.
   - Repeat – select the repeat type that you require (once, daily or weekly).

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/PDC	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 deleted 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.

SHOWVIEW®

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Recording

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**/ ⋆ EPG or 0 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 44.

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

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**/ ★ EPG 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

The "Title List-Original" Menu *VR*

The playlist (see page 50) 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.
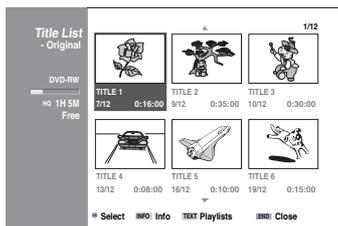
2. To display the Title List-Original options, select the desired title and press **OK**.
   The options are displayed on the left side of the menu.
   Use ▲ / ▼ to select an option, and press **OK** to confirm
   • **Play**: Starts playing the selected title.
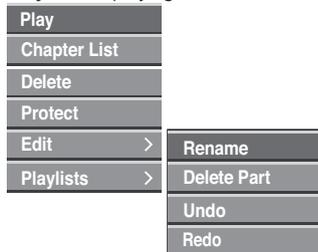
• **Chapter List**: Changes to the "Chapter List-Original List" for the selected title.
• **Delete**: Deletes the selected title (see page 51).
• **Protect**: Prevents inadvertent changing or deleting of a title (see page 58).
• **Edit**: Contains the following editing options:
   * **Rename**: Edits the title name.
   * **Delete part**: Deletes a part of the title.
   * **Undo**: Undoes the last deletion (see page 56).
   * **Redo**: Redoes the undo action (see page 56).
• **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.
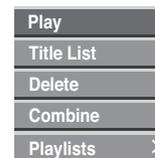
• **Play**: Starts playing the selected chapter.
• **Title list**: Changes to the "Title List-Original" menu (see left side of this page).
• **Delete**: Deletes the selected chapter (see page 55).
• **Combine**: Combines two chapters into one (see page 57).
• **Playlists**: Adds the selected chapter to the end of a playlist of your choice (see page 54).

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

Title List and Chapter List

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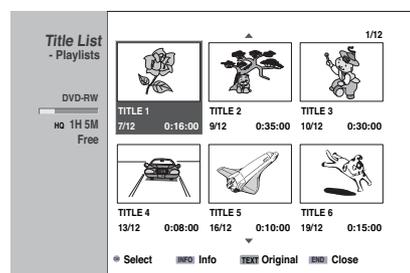
2. To display the options, select the desired title and press **OK**.
   The options are displayed on the left side of the menu.

3. Use ▲ / ▼ to select an option, and press **OK** to confirm.
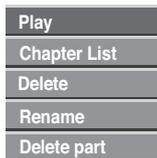
- **Play**: Starts playing the selected playlist.
- **Chapter list**: Changes to the "Chapter List-Playlists" for the selected title.
- **Delete**: Deletes the selected playlist (see page 55).
- **Rename**: Enables renaming of the selected playlist (see page 57).
- **Delete part**: Deletes a part of the selected playlist (see page 56).

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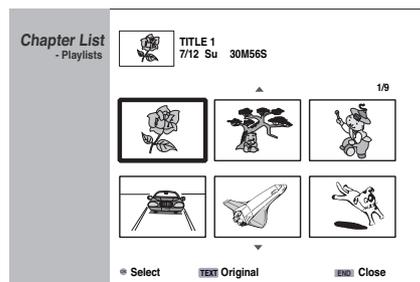
4. To display the options, select the desired chapter and press **OK**.
   The options are displayed on the left side of the menu.

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 55).
   - **Combine**: Combines two chapters into one (see page 57).
   - **Move**: Moves the selected chapter to another desired position in the playlist (see page 57).

---

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

Title List and Chapter List

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/**TEXT to display the Title List.

Title List			1/12
	Title	**Date**	**Duration**
DVD-RW	TITLE1	12/11	0:20:15
SQ 1H 5M Free	TITLE2	14/11	0:43:30
	TITLE3	18/11	0:33:00
	TITLE4	20/11	0:10:00
	TITLE5	23/11	0:15:00
	TITLE6	25/11	0:17:00
● Select INFO Info		END Close	
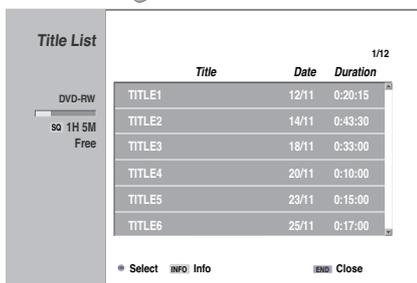
2. Use ▲ / ▼ to select a title, and press **OK**. The options are displayed on the left side of the menu.

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

Play
Rename
Delete

- **Play**: Starts playing the selected title.
- **Rename** : Edits the title name. (page 57)
- **Delete**: Deletes the selected title from the title list.

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

Note: Press INFO 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/**TEXT 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.

Play
Rename
Delete
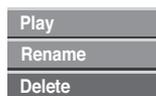
4. Repeat steps 2 - 3 to delete other titles from the title list.

5. Press END 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:

Current Page / Total Number of Pages
Disc Name
Title Data

◎ DVD-RW			1/2
1	TITLE 1	12/11 0:30:21	▲ PAGE UP
2	TITLE 2	14/11 0:20:08	▼ PAGE DOWN
3	TITLE 3	18/11 1:10:03	
4	TITLE 4	20/11 0:43:21	
5	TITLE 5	23/11 0:15:21	
6	TITLE 6	25/11 1:13:21	EXIT
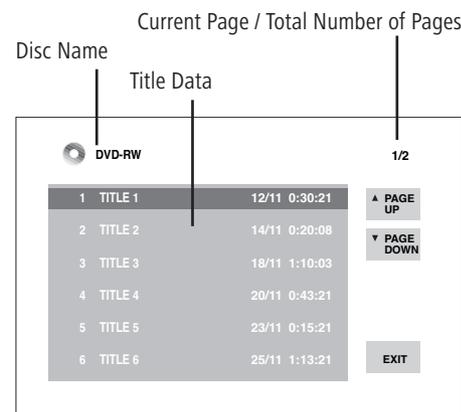
With ◄ ► you can access the buttons "**PAGE UP**" or "**PAGE DOWN**" you can scroll to other pages as required.
You can quit this menu using **EXIT**.

Press **OK** or ▶ to play the selected title.

Title List and Chapter List

The "Title List" Menu
VR +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.

Title List		1/12
SQ 1H 5M Free	TITLE 1 7/12 0:16:00	TITLE 2 9/12 0:35:00	TITLE 3 10/12 0:30:00
	TITLE 4 13/12 0:08:00	TITLE 5 16/12 0:10:00	TITLE 6 19/12 0:15:00
◉ Select	INFO Info ● REC	END Close

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
Play all
Chapter List
Delete
Protect
Edit >	Rename
	Divide
	Hide

- **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 55).
- **Protect**: Prevents inadvertent overwriting, changing or deleting of a title (see page 58).
- **Edit**: Contains the following editing options:
   * **Rename**: Edits the title name (see page 57).
   * **Divide**: Divides a title in two parts (see page 58).
   * **Hide**: Hides/Shows all chapters within the title (see page 58).

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 ⬤ 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.

Chapter List		TITLE 1 7/12 Sa 30M56S	
			1/9
◉ Select		END Close	

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
Title List
Combine
Hide

- **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 57).
- **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 58).

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

Title List and Chapter List

The "Title List" Menu
VR +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**/⬚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.

Title List				1/12
DVD+R	TITLE 1	TITLE 2	TITLE 3	
SD 1H 5M Free	7/12 0:16:00	9/12 0:35:00	10/12 0:30:00	
	TITLE 4	TITLE 5	TITLE 6	
	13/12 0:08:00	16/12 0:10:00	19/12 0:15:00	
● Select	INFO Info		END Close	

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
Play all
Chapter List
Delete
Protect
Edit >	Rename
	Divide
	Hide

   - **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 55).
- **Protect**: Prevents inadvertent overwriting, changing or deleting of a title (see page 58).
- **Edit**: Contains the following editing options:
  * **Rename**: Edits the title name (see page 57).
  * **Divide**: Divides a title in two parts (see page 58).
  * **Hide**: Hides/Shows all chapters within the title (see page 58).

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

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

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.

Chapter List	TITLE 1 7/12 Sa 30M56S		
			1/9
● Select		END Close	

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
Title List
Combine
Hide

   - **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 57).
   - **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 58)).

6. Press ⬚END 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 malfuntion.

Adding Chapter Markers

VR
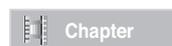
| ▌ ▌ **Chapter** |

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

| 🖼 **Thumbnail** |

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 56).

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**/⟨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 49.

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
Chapter List
Delete
Protect
Edit　　　　>
Playlists　　>

Play
Title List
Delete
Combine
Playlists　　>
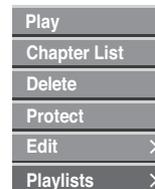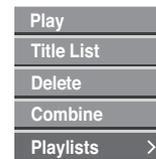
Title List-Original　　　　Chapter List-Original

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

Select a Playlist.
▲
🎞 **New Playlist** ⓞ🄺
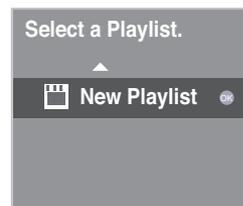
Title and Chapter Editing

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 49.

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
Chapter List
Delete
Protect
Edit >
Playlists >

Play
Title List
Delete
Combine
Playlists >

Use ▲ / ▼ to select "Playlists", and press **OK**.
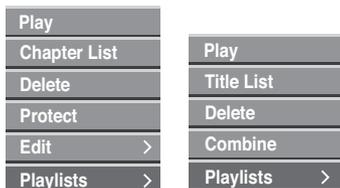
Select a Playlist.
▲
🎬 New Playlist
🎬 TITLE 1
🎬 TITLE 2   OK
▼
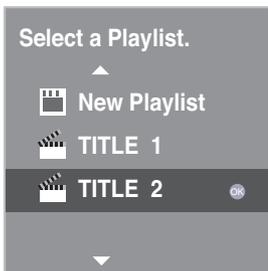
3. Select an existing playlist to add a title or a chapter and press **OK**.
   The updated playlist is displayed.

4. Repeat steps 1-4 to add additional titles or chapters to a playlist.

5. 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 >
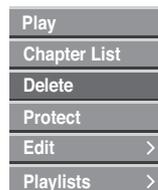
3. Press **OK** to confirm.
   The confirm delete message is displayed.

Delete selected chapter ?
Yes   No
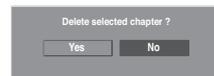
4. Use ◀ / ▶ to select "Yes" and press **OK**.
   The selected title or chapter is deleted.
   After pressing **OK** the list is updated.

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 consecutive titles are deleted they are combined into one "Empty Title".

Title and Chapter Editing

Deleting a Part

VR +RW

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

1. Press **DISC-M**/⟨TEXT⟩ 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.

Play	
Chapter List	
Delete	
Protect	**Delete**
Edit ＞	**Delete Part**
Playlists ＞	**Undo**
	Redo

Menu options for "Title List-Original"

Play
Chapter List
Delete
Rename
Delete Part

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.
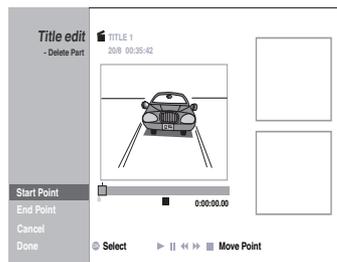
5. Start playback with **OK** and use
   • frame-by-frame advance (press [❚❚] repeatedly),
   • slow motion ([❚❚] + [◄◄] / [►►]),
   • search ([◄◄] / [►►]).

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 ([◄◄] / [►►]).

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**.

Play	
Chapter List	
Delete	**Rename**
Protect	**Delete Part**
Edit ＞	**Undo**
Playlists ＞	**Redo**

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 -RW

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

1. Use ▲ ▼ ◄ ► to select the title to be re-named 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**.

Play
Chapter List
Delete
Protect
Edit ⟩	Rename
Playlists ⟩	Delete Part
	Undo
	Redo

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).

```
NAME1 |
          ◄ Upper case letter ►
  1  2  3  4  5  6  7  8  9  0
  A  B  C  D  E  F  G  H  I  J
  K  L  M  N  O  P  Q  R  S  T
  U  V  W  X  Y  Z  '  Æ  Ç  Đ
  ·  °  ¨  ¯  ˝  Ø  Þ  «  »
     OK  Cancel  Space  Delete  ◄  ►
```

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 -RW

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".
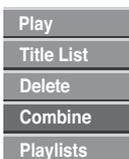
Play
Title List
Delete
Combine
Playlists

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 -RW

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-Play-lists" menu, read the "The Chapter List-Playlists Menu" on page 50.

```
Title List          ▲            1/12
- Playlists

DVD-RW    TITLE 1     TITLE 2     TITLE 3
HQ 1H 5M  7/12 0:16:00  9/12 0:35:00  10/12 0:30:00
Free

          TITLE 4     TITLE 5     TITLE 6
          13/12 0:08:00  16/12 0:10:00  19/12 0:15:00

● Select   INFO Info  TEXT Original  END Close
```
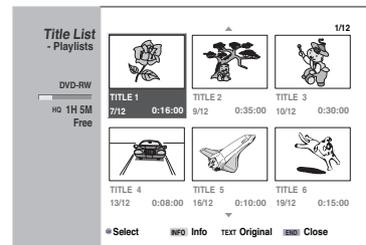
2. Select a chapter in the "Chapter List-Playlists" menu.

3. Press **OK**.
The options are displayed on the left side of the menu.

4. Use ▲ / ▼ to select "Move", and press **OK**.

Play
Title List
Delete
Combine
Move
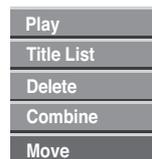
5. Use ▲ ▼ ◄ ► to select the position you want to move the chapter to (move the blue vertical line) and press **OK** to confirm the move. After pressing **OK** the updated menu is displayed.

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

Title and Chapter Editing

Protecting a Title

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

1. Press **DISC-M/**TEXT 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.

Play
Play all
Chapter List
Delete
Protect
Edit 〉
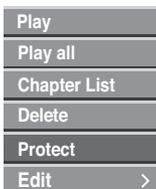
4. Press **OK** to confirm.
   The **"**Protect Symbol" (lock) appears in the thumbnail of the protected title.
Note: A protected title can also be unprotected using this procedure. The title can then be overwritten, edited or deleted again.

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".

Play	
Play all	
Chapter List	
Delete	Rename
Protect	Divide
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.

Play	
Play all	
Chapter List	
Delete	
Protect	Rename
Edit	Divide
	Hide
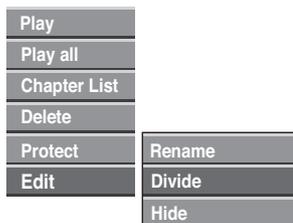
3. Press **OK** to confirm.
   The "Edit Title - Divide" menu appears and the film is stopped.

Current picture

Thumbnail of the first title

Thumbnail of the second title
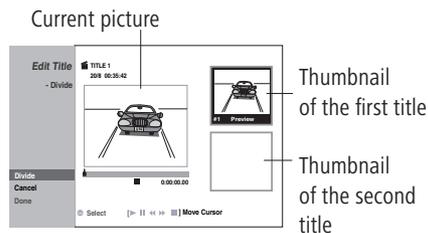
4. Start playback and search for the point at which you want to divide the title using
   • frame-by-frame advance (press ⏸ repeatedly),
   • slow motion (⏸ + ◀◀ / ▶▶),
   • search (◀◀ / ▶▶).

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

Overwriting a Recording

VR +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/TEXT** for the "Title List" menu.
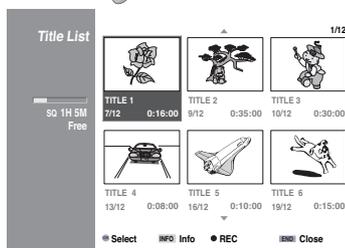
3. Use ▲ ▼ ◀ ▶ to select a title to be overwritten.

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

VR +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/TEXT** button in stop mode.
   The "Title List" menu appears as below.
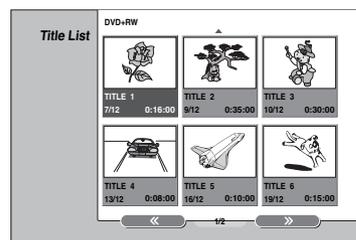
3. To play a title select the title and press **OK** or ▶.

Note: The "Title List" menu can by 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/TEXT** 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 your 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/WMA, JPEG, (X)VCD, (X)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 45
	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 44)
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 2102 HD	Item No. 64502
Centros 2172 HD	Item No. 64512
Power supply	AC 110-240V, 50/60 Hz
Power consumption	During operation: 35 W
	In standby mode: <1 W
	(with energy save function)
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 2102 HD: PAL B/G, PAL I, Secam DK
	Centros 2172 HD: 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	DVD+R (4,7 GB)
	Approx. 1 hour (HQ mode),
	2 hours (SQ mode),
	4 hours (LQ mode),
	6 hours (EQ mode)
	DVD+R DL (8,5GB):
	Approx. 3 hours (HQ mode)
	3:40 hours (SQ mode),
	7:10 hours (LQ mode),
	10:30 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	> 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(DV-25)
Cardreader	8 in 2: SD, MMC, Memorystick (Pro), CF, MD, xD, SMC

Outputs

HDMI OUT	Type A, 19 Pin, LVDS digital
VIDEO OUT	1 Vp-p 75 &, 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 3
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

Using other Loewe devices with the RC3 remote control

You can use other Loewe devices with this remote control.
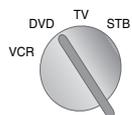
Use the rotary switch to select VCR, TV or a set-top box. Loewe video recorders, Loewe television sets and the d-box which is commonly used in Germany as a set-top box are set up ex-factory.

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 (e.g. Centros 21x2) (ex-factory it is set to control the built-in "Digital Recorder Plus"):
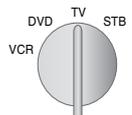
First set the switch to the main TV or STB function.

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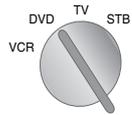
to DVD or VCR, or TV if the digital recorder is to be used.

Press the **# PIP** button to finalise the setting. The display will flash another two times.
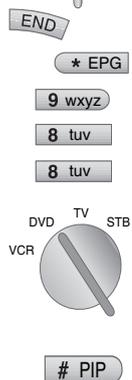
Setting the remote to control devices made by other manufacturers

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

Find the right code number for your unit in the "Code list RC3" (in the middle of this booklet). 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.

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.
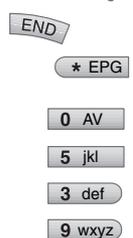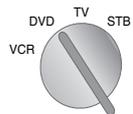
Using the remote's suggestions to set up remote control

Switch on the device which you want to convert the remote control to. Note that Standby is inadequate!
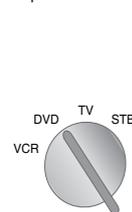
Use the rotary switch to select whether you want to switch to using a VCR, DVD device or a set-top box.

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.

Operating additional devices

Use the RC3 remote control for operating a Loewe Flat TV set

Set the rotary switch to "TV".

Using the RC3 remote control to operate a VCR

Set the rotary switch to "VCR".
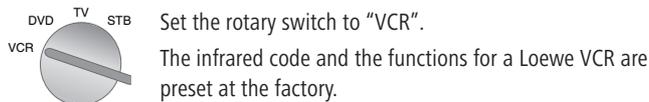
The infrared code and the functions for a Loewe VCR are preset at the factory.

In VCR mode, the following VCRs can be operated: ViewVision 8106H, 8136H, 8176H, 6306H, 6336H, 6376H, 6396H, 4306H, 4376H, 2102M, 2302M, 4206, 4236, 4276.

For other Loewe equipment than that listed, please use the original remote control.

Functions for Loewe Flat-TV sets (Chassis L2650)

Control LED for programming the remote LED

Change-over switch for operating of TV, VCR, DVD recorder/player or Set Top Box
— Switch on/off - on standby

Sound off/on
— Picture menu on/off

Call timer list
— Sound menu on/off

Menu "Additional functions" on/off
— Radio on/off [2]

Set picture format
— Select station directly /in the menu: enter numbers or letters

Electronic Programme Guide (EPG) on/off
— Call AV selection

Show/hide menu
— PIP on/off (picture in picture)

Analogue Teletext on/off [3]
— Status display on/off [3] /in the menu: hide menu

V−/V+ Volume down/up
— Open index /in the menu: info texts on/off

for PIP: Position of the PIP picture / in the menu: select/set
— P+/P− Select station up/down

Red button: [3] freeze picture on/off [1]
— Station list on /in the menu: confirm/call

Green button: [3] Standard settings for picture/sound
— Blue button: [3] programme info off/on

Select station down [1] / in the Wizard: back
— Yellow button: [3] previous station

Direct recording [1]
— Select station up [1]

Freeze picture on/off [1]
— Freeze picture off [1]

— Freeze picture on [1]

[1] when equipped with Digital Recorder +, these buttons have different functions, see operating instructions of the Digital Recorder

[2] Radio only for DVB reception if broadcast by the station

[3] with DVB-T stations in UK different function. The coloured keys do not work as described with DVB-T stations in UK, but they operate as described on page 28 (Digital Teletext).

Functions for Loewe DVD/VCRs (VV 8106, 8136, 8176)

Change-over switch for operating of TV, VCR, DVD or Set Top Box
— Switch recorder on/off – in standby

Sound off/on (mute)
— Select picture and sound source

Display/close Timer list
— Select video and audio input

Display/close ShowView timer Menu
— Set time display to 0:00:00

Switch to Long Play /Standard Play
— Select station directly /in menu: enter digits

Call AV selection (TV)
— Set picture format (TV)

VCR menu on /in menu: back
— Status display on/off in the menu: Close menu

P+/P− Select station up/down
— Status display on/off

Reverse play /in menu: select/set
— on playback: Slow motion forward /in the menu: select/set or to the next menu

V−/V+ volume quieter/louder
— Call up station list /in menu: call up/confirm

▲ / ▼ at stop: Program up/down on playback: manual tracking in the menu: Select position

Rewind /search backwards
— Fast forward /search forwards

Start recording
— Start playback

Pause (still frame) /frame-by-frame advance
— Stop tape

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 Gaelic	8083	Pashto		
		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	MX	Mexico
AM	Armenia	DK	Denmark		in the Indian Ocean	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	Azerbaizhan	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	KY	Cayman Islands	PF	Polynesia (French)
BJ	Benin		Territory)	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	MN	Mongolia		
CO	Columbia		Islands	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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Codelist RC3 / Lista de códigos RC3

Loewe

DVD-Player	0539
DVD-Recorder Centros 11x2	0741
DVD-Recorder Centros 21x2	1463
STB	1127
VCR	0866

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
	0713	0818	0695	0831	0723
C-Tech					0768
Cambridge Audio					0696
Cambridge Soundworks					0696
CAT					0699
Celestial					0672
Centrex				0672	1004
Centrum					0713
cineULTRA					0699
Classic					0730
Clatronic					0788
Clayton					0713
Coby					0730
Conia					0690
Crown			0770	0651	0690
Cybercom					0831
CyberHome				0714	0816
Cytron			0716	0651	0705
Daewoo			0770	0705	0714
Daewoo International					0699
Dansai				0770	0783

Dantax					0723
DEC				0699	0818
Decca					0770
Denon				0490	0634
Denver				0699	0788
Denzel					0665
Diamond		0651	0768		0723
Digihome					0713
digiRED					0717
Digitrex					0672
DiK					0831
Dinamic					0788
DiViDo					0705
DK digital					0831
DMTECH				0783	0790
Dragon					0831
Dual	0665	0651	0713		0730
			0783	0790	0831
E-Boda					0723
Eclipse					0723
Electrohome					0770
Elin					0770
Elta	0690	0770	0788		0790
Emerson				0591	0705
Enzer					0665
Ferguson					0651
Finlux			0741	0770	0783
Firstline					0651
Funai					0695
GE					0717
Global Solutions					0768
Global Sphere					0768
Go Video					0783
GoldStar				0591	0741
Goodmans	0651	1004	0790		0690
			0783	0723	0818
Graetz					0665
Grandin					0716
Grundig	0539	0695	0651		0775
	0705	0790	0713	0670	0723
Grunkel					0770
H&B				0818	0713
Haaz					0768
Hanseatic					0741
HCM					0788
HDT					0705
HE					0730
Henß					0713
Hitachi			0664	0665	0573
Hiteker					0672
Home Electronics					0730
Hyundai					0783
Ingelen					0788
ISP					0695
Jeken					0699
JMB					0695
JVC	0623	0539	0503	1901	1940

Karcher					0783
Kendo					0699
Kenwood			0534	0490	0737
Kiiro				0718	0770
Kingavon					0818
Kiss					0665
Koda					0818
Koss					0651
Lawson			0705	0716	0768
Lecson					0696
Lenco	0699	0651	0770		0818
Lenoxx					0690
Lexia					0699
LG			0591	0741	1906
Lifetec					0651
Limit				0716	0768
Loewe				0539	1922
LogicLab					0768
Logix				0705	0783
Lumatron					0705
Luxman					0573
Luxor					1004
Magnavox				0503	0818
Magnex					0723
Manhattan					0705
Marantz					0539
Mark					0713
Matsui				0651	0695
MBO				0690	0730
MDS					0699
Medion		0651	0783	0716	0831
Memorex					0831
Metz				0571	0713
MiCO					0723
Microboss					0718
Micromaxx					0695
Micromedia				0503	0539
Micromega					0539
Microsoft					0522
Microstar					0831
Minax					0713
Minoka					0770
Mitsubishi					0713
Mizuda					0818
Monyka					0665
Mustek					0730
Mx Onda				0651	0723
NAD					0741
Naiko					0770
Neufunk					0665
Nordmende					0831
Omni				0690	0699
Onkyo				0627	0503
Optimus					0571
Orava					0818
Orion					0695
Oritron					0651

P&B					0818
Pacific	0768	0790	0713		0831
Palladium					0695
Palsonic				0689	0672
Panasonic				0490	1908
Panda					0783
Philips	0539	0646	0503		1914
Phonotrend					0699
Pioneer	0571	0631	1900		1902
Pointer					0770
Powerpoint					0718
Proline	0651	0672	0790		1004
Proscan					0522
Prosonic					0699
Provision					0699
Radionette					0741
Raite					0665
Rank Arena					0718
RCA				0522	0651
REC				0689	0490
Red Star				0770	0788
Reoc					0768
Revoy					0699
Roadstar	0699	0690	0689	0713	0818
Rotel					0623
Rowa					1004
Saba					0651
Sabaki					0768
Salora					0741
Samsung				0573	0490
Sansui	0695	0716	0768	0723	0770
Sanyo			0670	0695	0790
Scan					0705
ScanMagic					0730
Schaub Lorenz				0788	0770
Schneider	0651	0783	0705	0790	0788
Scientific Labs					0768
Scott				0718 0651	0672
SEG				0665 0713	0768
Shanghai					0672
Sharp				0630	0695
Sherwood			0717	0741	0633
Shinco					0717
Silva					0788
SilvaSchneider					0831
Singer			0690	0716	0723
Skymaster				0730	0768
Slim Art					0770
SM Electronic			0730	0768	0690
Smart			0718	0705	0713
Sonashi					0716
Sony	0533	0573	1903		1904
Soundmaster					0768
Soundmax					0768
Soundwave					0783
Standard				0651	0768
Starmedia					0818

Codelist RC3 / Lista de códigos RC3

Brand	Codes
Sunwood	0788
Supervision	0730 0768
SVA	0672
Synn	0768
Tandberg	0713
Tatung	0770
Teac	0717 0741 0571 0768 0591 0790
Technics	0490 1908
Technika	0770
Techwood	0713
Tensai	0690 0651
Tevion	0651 0768
Theta Digital	0571
Thomson	0551 0522
Tokai	0665 0788
Tokiwa	0705 0716
Toshiba	0503
Umax	0690
United	0788 0730 0790
Universum	0741 0713 0591
Venturer	0790
Vieta	0705
Voxson	0730 0831
Walkvision	0717
Welkin	0831
Wesder	0699
Wharfedale	0696 0723
Windy Sam	0573
XBox	0522
XLogic	0770 0768
XMS	0788 0689
Yamada	1004
Yamaha	0490 0539 0646
Yamakawa	0665 0710 0765
Yelo	0718
Yukai	0730
Zenith	0503 0591 0741

VCR

Brand	Codes
Adyson	0072
Aiwa	0307 0000 0209 0348 0352 0037 0041
Akai	0106 0315 0041 0352 0240
Akashi	0072
Akiba	0072
Akura	0072 0041
Alba	0278 0072 0209 0352 0000 0315 0348 0081
Allorgan	0240
Allstar	0081
Amstrad	0000 0278 0072
Anitech	0072
Ansonic	0000
Aristona	0081
ASA	0037 0081
Asuka	0072 0037 0081 0000 0038
Audiosonic	0278
AVP	0352 0000
AWA	0037 0278 0642 0043
Baird	0106 0278 0104 0041 0000
Basic Line	0278 0209 0072
Bestar	0278
Black Diamond	0642 0278
Black Panther	0278
Blaupunkt	1562 0226 0081
Blue Sky	0037 0209 0348 0072 0352 0278 0000
Bondstec	0072
Brandt	0041 0320
Brandt Electronique	0041
Brinkmann	0209 0348
Bush	0072 0278 0315 0209 0352 0000 0348 0081 0209 0081
Carena	0045
Carrefour	0000
Casio	0278
Cathay	0278
CGE	0041 0000
Cimline	0072 0209
Clatronic	0072 0000
Combitech	0352
Condor	0278
Crown	0278 0072
Cyrus	0081
Daewoo	0278 0642 0209 0348 0352 0045
Dansai	0072 0278
Daytron	0278
de Graaf	0042 0081 0104 0048
Decca	0000 0041 0081 0067 0348 0209
Deitron	0278
Denko	0072
Diamant	0037
Domland	0209
Dual	0041 0081 0278 0000
Dumont	0000 0081 0104
Elbe	0278 0038
Elcatech	0072
Elin	0240
Elsay	0072
Elta	0072 0278
Emerson	0072 0045 0000
ESC	0278 0240
Etzuko	0072
Fast	0897
Ferguson	0041 0320 0000 0278
Fidelity	0000 0072 0240
Finlandia	0104 0081 0042 0000 0048 0384
Finlux	0000 0081 0104 0042
Firstline	0072 0209 0348 0043 0037
	0045 0042 0278
Fisher	0047 0104 0038
Flint	0209
Frontech	0072
Fujitsu	0000
Funai	0000
Galaxi	0000
Galaxis	0278
GE	0320
GEC	0081
General Technic	0348
Genexxa	0104
Goldhand	0072
GoldStar	0037 0000
Goodmans	0000 0072 0240 0278 0037 0081 0348 0209 0352 0642
Graetz	0041 0104 0240
Granada	0104 0048 0081 0240 0037 0226 0042 0000
Grandin	0072 0037 0000 0278 0209
Grundig	0081 0347 0226 0320 0348 0072
Haaz	0348 0209
Hanimex	0352
Hanseatic	0037 0209 0278 0081 0038
Harwood	0072
HCM	0072
Hinari	0072 0209 0352 0041 0278 0240
Hisawa	0209 0352
Hischito	0045
Hitachi	0042 0041 0000 0240 0081 0104 0384
Hornyphone	0081
Hypson	0072 0209 0278 0352
Imperial	0000 0240
Ingersoll	0209 0240
Inno Hit	0240 0278 0072
Interbuy	0037 0072
Interfunk	0081 0104
Internal	0278
International	0278 0037
Intervision	0000 0278 0037 0209 0348
Irradio	0072 0037 0081
ITT	0106 0041 0384 0104 0240
ITT Nokia	0048
ITV	0278 0037
JMB	0209 0352
Joyce	0000
JVC	0041 0067 0384
Kaisui	0072
Kambrook	0037
Karcher	0278
Kendo	0106 0209 0315 0348 0072 0037
Kenwood	0041 0038
KIC	0000
Kimari	0047
Kneissel	0352 0209 0348 0037
Kolster	0209 0348
Korpel	0072
Kuba	0047
Kuba Electronic	0047
Kuwa	0226
Kyoto	0072
Lenco	0278
Leyco	0072
LG	0037 0000 0278 0209 0348
Lifetec	0209 0348
Loewe	0081 1562 0226 0866 0037
Logik	0240 0072 0106 0209
Lumatron	0278
Luxor	0106 0043 0072 0104 0047 0048
Magnavox	0081
Manesth	0072 0045 0081 0209
Marantz	0081 0038 0209
Mark	0278
Matsui	0209 0348 0037 0240 0352 0000
Mediator	0081
Medion	0209 0348 0352
Melectronic	0000 0037 0038
Memorex	0104 0000 0037 0048 0047
Memphis	0072
Metz	1562 0347 0081 0226 0037
Micormay	0348
Micromaxx	0209
Migros	0000
Mitsubishi	0043 0067 0081
Multitec	0037
Multitech	0000 0072 0104
Murphy	0000
Myryad	0081
NAD	0104
National	1562 0226
NEC	0041 0038 0067 0104 0037
Neckermann	0041 0081
Nesco	0072 0000 0352
Neufunk	0209
Nikkai	0072 0278
Nokia	0104 0106 0315 0041 0278 0240 0048 0042 0081
Nordmende	0041 0384 0320 0067
NU-TEC	0209 0348
Oceanic	0000 0048 0106 0081 0104 0041
Okano	0315 0209 0348 0072 0278
Orbit	0072
Orion	0209 0352 0348
Orson	0000
Osaki	0000 0037 0072
Osume	0072
Otake	0209

Brand	Codes
Otto Versand	0081
Palladium	0072 0315 0037 0041 0209 0240 0348 0432
Palsonic	0072 0000
Panasonic	1562 0226
Pathe Cinema	0043
Pathe Marconi	0041
Perdio	0000 0209
Philco	0038 0072
Philips	0081 0384
Phoenix	0278
Phonola	0081
Pioneer	0067 0081 0042
Portland	0278
Prinz	0000
Profitronic	0081 0240
Proline	0000 0320
Prosco	0278
Prosonic	0209 0278 0000
Protech	0081
Provision	0278
Pye	0081
Quasar	0278
Quelle	0081
Radialva	0037 0072 0081 0048
Radiola	0081
Rank	0041
Reoc	0209 0348 0278
Rex	0041 0384
RFT	0072
Roadstar	0240 0072 0037 0278
Royal	0072
Saba	0041 0320 0384 0278
Saisho	0209 0348
Salora	0043 0106 0104
Samsung	0240 0432
Sansui	0041 0067 0106 0072 0348
Sanyo	0104 0047 0048 0067
Saville	0352 0278 0240
SBR	0081
Scan Sonic	0240
Schaub Lorenz	0041 0104 0000 0106
Schneider	0072 0000 0037 0081 0278 0240 0042 0897
Seaway	0278
SEG	0072 0240 0278 0642 0081
SEI	0081
Sei-Sinudyne	0081
Seleco	0041 0384 0037
Sentra	0072
Setron	0072
Sharp	0048 0037 0569
Shintom	0072 0104
Shivaki	0037
Siemens	0037 0104 0081 0320 0347
Siera	0081
Silva	0037
Silver	0278
Singer	0045
Sinudyne	0081 0209
Smaragd	0348
Sonitron	0047
Sonneclair	0072
Sonoko	0278
Sonolor	0048
Sontec	0037 0278
Sony	0032 0106
Soundwave	0037 0209 0348
Ssangyong	0072
Standard	0278
Starlite	0037 0104
Stern	0278
Sunkai	0209 0348 0278
Sunstar	0000
Suntronic	0000
Sunwood	0072
Supra	0037 0240
Symphonic	0000 0072
T+A	0226
Taisho	0209
Tandberg	0278
Tashiko	0000 0048 0240 0081 0037
Tatung	0000 0041 0081 0048 0043 0209 0348 0352
Teac	0072 0041 0000 0278 0642 0037 0081 0307
TEC	0278 0072
Tech Line	0072
TechniSat	0348 0209
Teleavia	0041
Telefunken	0041 0320 0384 0278
Teletech	0072 0278 0000
Tenosal	0072
Tensai	0000 0037 0072
Tevion	0348 0209
Thomson	0320 0041 0067 0384 0278
Thorn	0041 0104 0037
Thorn-Ferguson	0320
Tokai	0072 0037 0041 0104
Tokiwa	0072
Topline	0348
Toshiba	0045 0041 0384 0043 0081
Towada	0072
Tredex	0278
Uher	0037 0240
Ultravox	0278
Unitech	0240
United Quick Star	0278
Universum	0000 0081 0240 0037 0106 0348 0209 0104
Victor	0067
Watson	0081 0352 0278 0642
Weltblick	0037
Yamaha	0041
Yamishi	0072 0278
Yokan	0072
Yoko	0037 0072 0240
ZX	0209

SAT /STB)

Brand	Codes
@sat	1300
ABsat	0668 0123 1323 0710
ADB	0642
Adcom	0200
AGS	0668 0710
Akai	0200
Akena	0668
Alba	0455 0713
Allsat	0200 1017 1043
Alltech	0713
Alpha	0668 0200
Altai	0396
Amitronica	0713
Ampere	0396 0132
Amstrad	0847 0713 0742 0396 0132 0882 0885 0863 0501 0795 1113
Anglo	0713
Ankaro	0713
AntSat	1017 1083
Apollo	0455
Arcon	1205 1043 0834 0132 1075
Armstrong	0200
Asat	0200
ASLF	0713
AssCom	0853
Astacom	0668 0710
Aston	1129
Astra	0607 0713
Astro	0133 0173 0501 0658 0607 1113 1099 1100 0200
Athena	0668
Atlanta	0871
Aurora	0879
Austar	0863 0642 0497 0879 1176
Avalon	0396
Axiel	0668 0710
Axis	1111 0834
Beko	0455
Bentley Walker	1017
Blaupunkt	0173
Blue Sky	0713 0885
Boca	0132 0713
Boston	0132 0710 0668
Broco	0713
BskyB	0847 1175
BT	0668 0710
Bubu Sat	0713
Cambridge	0501
Canal Satellite	0853
Canal+	0853
Cherokee	0123 0710 1323
Chess	0157 0605 0713 1085
CityCom	1176 0115 0607 0299
Clemens Kamphus	0834 0396
Cobra	0396
Colombia	0668 0132
Columbia	0132
Columbus	0668
Comag	0132
Condor	0607
Connexions	0396
Conrad	0607 0573 0115 0501
Conrad Electronic	0607 0713
Cryptovision	0455 0795
Cyrus	0200
D-box	1127 1114 0723
Daeryung	0396
Daewoo	1296 0713
Delfa	0863
Deltasat	1075
DGTEC	1242
Digatron	1294
Digenius	0299
Digiality	0607
Digipro	1105
DigiQuest	0863
Diskoverer	0605 0157
Diskovery	0668 0710
Diseqc	0710
Distratel	0084 0885 1205
Distrisat	0200
DMT	1075
DNT	0200 0396
DREAM multimedia.TV	1237
DStv	0642 0879
Echostar	0610 1169 0871 0167 0853 1086 1200 0454 0396 0713 0668 0511 0453
Einhell	0132 0713 0501
Elap	0713 1129 0668 0710
Elsat	0713
Elta	0200
Emme Esse	0871
Engel	1017 0713
EP Sat	0455
Eurieult	0084 0885 0882
Eurocrypt	0455
Europa	0863 0607 0501 0200
Europhon	0299 0607
Eurosky	0607 0132 0299 0115 0114 0501
Eurostar	0607 0115
Fenner	0668 0157 0605 0713

Ferguson	0455
Fidelity	0501
Finlandia	0455
Finlux	0573 0455
Flair Mate	0713
Force	1101
Fortec Star	1017 1083
Foxtel	0879 0720 0455 0497 0795 1176
Fracarro	0871 0668
Freecom	0501 0173
Freesat	0882
FTEmaximal	0713 0863
Fuba	0396 0173 0573 0115 0299
Fugionkyo	1105
Galaxis	1111 1101 0834 0863 1176 0853 0115 0879
Garnet	1075
GF	0834 1043
GF Star	1043
GOD Digital	0200
Goldbox	0853
Goldvision	1017
Gooding	0571
Goodmans	1284 0455
Gradiente	0887
Granada	0455
Grandin	0084
Grundig	0173 0847 1150 1291 1435 0571 0750 0879 0885 0853 0501 1297 1330
Hanseatic	0605 1099 1100
Hänsel & Gretel	0132 0607
Hauppauge	1294
HDT	1011
Heliocom	0607
Helium	0607
Hirschmann	0396 0882 1113 1111 0173 0573 1085 0299 0501 0710 0607 0668
Hitachi	0455
HNE	0742 0132
Houston	0668 0396
Humax	1176 0863
Huth	0132 0607 1017 1075
Hyundai	1011 1159 1075
ID Digital	1176 0863
Imex	0084
Ingelen	0396 0882
International	0132
Interstar	1105 1017
Intervision	0628 0607
Invideo	0871
IRTE	0609
Italtel	0871
ITT Nokia	0573 0455 0723
JOK	0710

JVC	0571
K-SAT	0713
Kamm	0713
Kaon	1300
KaTelco	1111
Kathrein	0658 0249 1057 0173 1221 0200 0713 0668 0742 0123 0115 1323 0710
Kathrein Eurostar	0115
Kiton	0114
Klap	0668 0710
Konig	0607
Koscom	0834 1043
Kreiling	0658 0249 0114
Kreiselmeyer	0173
Kyostar	0132
L&S Electronic	1043
Labgear	1296
LaSAT	0607 0115 0132 0157 0299
Lenco	0713 0115 0607
Lenson	0501
Lexus	0200
LG	1075
Lifesat	0605 0299 1043 0713
Logix	1017 1075
Lorenzen	0299 1294 0607 0742 0132
Luxor	0573 0501
M&B1	0605
Manata	0710 0668 0713
Manhattan	1083 0455 0710 0668 0834 1017
Marantz	0200
Maspro	0750 0713 0173 0571
Matsui	0571 0710 0173
Max	0607
MB	0605
Mediabox	0853
Mediacom	1206
MediaSat	0501 0853
Medion	0713 0299 1043
Medison	0713
Mega	0200
Metronic	0713 1215 0084 0885 1205
Metz	0173
Micro	0607 0501 0713
Micro electronic	0713
Micro Technology	0713
Micromaxx	0299
Microtec	0713
Minerva	0571
Mitsubishi	0455
Morgan's	0200 0713 0132
Motorola	0856
Multichoice	0642 0879
Multitec	0157
Myryad	0200
Mysat	0713

Netgem	1322
Neuhaus	0501 0713 0834 0607
Neusat	0713 0834
Nikko	0713 0723 0200
Nokia	1023 1114 0751 1127 0723 0853 0573 1223 0455 1723 1310 1312
Nordmende	0455
Nova	0879
OctalTV	1294
Okano	0668
OnDigital	0751 0329 0241 0867 0133
Optex	0834
Optus	0879 0853
Orbitech	1099 1100 0200 0501 0157
Origo	0497
Ouralis	1205
Oxford	0668
Pace	0455 0847 0887 1175 0241 0867 0123 1323 0791 0795 0720 0497 0200 0853 0710 1423
Packsat	0710
Palcom	0299
Palladium	0571 0501
Palsat	0501
Panasat	0879 0615
Panasonic	0847 1104 0455 1320
Panda	0455 0607 0173 0834
Patriot	0668
Philips	0200 1114 0853 0455 0750 0710 0668 0571 0173 0133 1336
Phonotrend	0863 1017 1200
Pioneer	0329 0853 0352
Planet	0871 0396
Polytron	0396
Praxis	0511
Preisner	0132 0396 1101 1113
Premiere	0853 1114 1127 0723 1111 1176 1195 1100 0249 0658 1435
Primacom	1111
Profile	0668 0710
Promax	0455
Prosat	0628
Prosonic	0742
Pye	0571
Pyxis	0834
Quadral	0628 0668 0710 1323
Quelle	0607 0742 0115
Radiola	0200
Radix	0396 1113 0882
RFT	0200
Roadstar	0713
Rover	0628 0713
Saba	0710 0885 0115 0607
Sabre	0455
Sagem	0820 1114 1253
Samsung	0863 1243 1343 0853 1206

	1017 1293 1292
SAT	0501
Sat Control	1300
Sat Partner	0501
Sat Team	0713
Satcom	0605 0607
Satec	0713 0834
Satline	0628
Satstation	1083
Schneider	0710 0668 0157 1206
Schwaiger	0605 0157 0607 0885 1111 0132 1075
SCS	0115 0299
Seemann	0396
SEG	0605 0742 0114 1087
Seleco	0871
Septimo	1205 0885
Siemens	0173
Skantin	0713
Skinsat	0501
SKR	0713
Sky	0847 0856 0887 1014
SKY+	1175
Skymaster	0713 0605 0157 1200 1085 1075 0628
Skymax	0200
SkySat	0157 0605 0713
SL	0132 0742
SM Electronic	0157 0713 1200 1075 1085
Smart	0132 0299 1101 0882 0396 1113 0115 0713
Sony	0282 0847 0853 0455
SR	0132
Starland	0713
Strong	0879 0853 1105 1159 1300
Sunsat	0713
Sunstar	0132
Tantec	0455
Tatung	0455
Teac	1322
Tecatel	1200
TechniSat	0200 1099 1100 1195 0501 1322
Technosat	1206
Technowelt	0607 0885
Techsan	1017
Techwood	0114
Telasat	0605 0115 0607
Teleciel	1043
Telecom	0713
Telefunken	0710
Teleka	0396 0750 0501 0607 0834
Telesat	0605 0607
Telestar	0501 1099 1100 0114 0200 0157
Teletech	0114

Codelist RC3 / Lista de códigos RC3

Televes			0455	0501	0132
Thomson	0455	0713	0853	0115	0607
	12910820		0668	0710	1046
Thorn					0455
Tokai					0200
Tonna	0455	0668	0501	0713	0834
Topfield					1206
Toshiba					0455
TPS				0820	1253
Triasat					0501
Triax	0501	0115	0200	0396	0713
	08530114		1296	1291	0132
Turnsat					0713
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
France Telecom		0817
General Instruments		0276
Jerrold	0003	0276
Kabelvision		0003
Macab		0817
Melita		0003
MNet		0443
Mr Zapp		0817

Noos		0817
NTL Cabletell		0276
Ono		1068
Optus	0276	1060
Pace	1068	1060
Philips	0817	0286
PVP Stereo Visual		0003
Sagem		0817
Tele+1		0443
Telepiu		0443
Tudi		0286
United Cable		0003
Visiopass		0817

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