

USER MANUAL

DVD 1235 R

Welcome.

We are delighted that you have decided to purchase a **T+A** product. With your new **DVD 1235 R** you have acquired a top-quality piece of equipment which has been designed and developed with the wishes of the audiophile music lover as absolute top priority.

Our innovative approach to solving problems, solid and carefully thought-out construction, and the highest quality materials ensure that this unit will satisfy your greatest demands and requirements over a period of many years.

Thorough quality checking of all materials, painstaking production by highly qualified staff, and a fully automatic, computer-controlled final quality control process guarantee a product of high quality which meets the specification in full.

In our production system we avoid the use of all environmentally harmful and potentially injurious substances, such as chlorine-based solvents and CFCs.

Moreover we avoid the use of plastics (especially PVC) as a constructional element wherever possible. Instead we rely upon metals and other non-harmful materials which on the one hand are recyclable and on the other offer very good electrical shielding characteristics.

Our insistence on solid all-metal cases eliminates the problem of adverse effects on sound quality caused by external sources of interference. This also ensures that the electro-magnetic radiation (electro-smog) caused by our equipment is effectively shielded, reducing it to an absolute minimum.

Your new **DVD 1235 R** will play back all media that comply with the universal DVD-Video and SACD-Audio standard. This machine is capable of reproducing films in genuine cinema picture quality.

All the unique features of DVD video are available, such as selecting the sound channel and sub-title language, and choosing different angles of view (also depending on DVD type). The unit also includes a child security system which allows you to determine which DVDs your children are permitted to view.

Additional to DVD discs you can also play back Video-CDs (VCD, S-VCD), JPEG picture discs, MP3 music CDs and audio CDs (CDDA). The media that can be played back are labelled with one or more of the labels below:



The unit features digital audio outputs for connection to **D I G I T A L** 1), DOLBY 2) and MPEG multi-channel decoders.

A range of high-quality cables and connectors is available as accessories for this unit, as well as specially designed furniture matching the player's design.

For picture reproduction at the highest possible quality, especially with large-format flat-screen displays and projectors, an optional Progressive Scan output module is available.

Please accept our thanks for your faith in us; we wish you many hours of pleasure with your DVD 1235 R.

T+A elektroakustik GmbH & Co KG

- All components used in this device satisfy the currently valid German and European safety norms and standards. In the interests of your own safety please read right through these operating instructions, paying particular attention to the safety notes and the instructions for setting up and operating the equipment.
- Manufactured under licence to Dolby Laboratories. "Dolby" and the double-D symbol are registered trademarks of Dolby Laboratories. Confidential, unpublished documents. © 1992-1997 Dolby Laboratories. All rights reserved.
- 2) "DTS" is a registered trademark of Digital Theater Systems, Inc.

This product complies with the Low Voltage Directive (73/23/EEC), EMV Directives (89/336/EEC, 92/31/EEC) and CE Marking Directive (93/68/EEC).

IMPORTANT! CAUTION!

This product contains a laser diode of higher class than 1. To ensure continued safety, do not remove any covers or attempt to gain access to the inside of the product.

Refer all servicing to qualified personnel.

The following caution label appear on your device:

Rear panel

CLASS 1 LASER PRODUCT

On the inner protective housing of the DVD mechanism

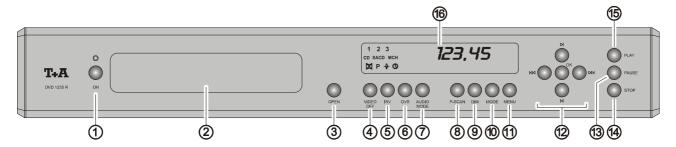
| CAUTION: | VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM |
|------------|--|
| VORSICHT: | SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET NICHT DEM STRAHL AUSSETZEN |
| ATTENTION: | RAYONNEMENT LASER VISIBLE ET INVISIBLE EN CAS D'OUVERTURE EXPOSITION DANGEREUSE AU FAISCEAU |
| DANGER: | VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM |

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Front panel controls





On / Off switch.

The green LED glows when the unit is switched on and ready to use.

Note:

If the **DVD 1235 R** is connected to a pre-amplifier, integrated amplifier or receiver within an **'R'** system, it can be switched off, with the whole system, by pressing the button on the remote control handset.

Note:

The mains button does not disconnect the device from the mains completely. Some parts of the circuit are still live when the unit is switched off.

(2) CD Drawer

The drawer of the **DVD 1235 R** consists of a combination of a special plastic with good damping qualities, and solid, precision-machined treated aluminium. It's floating and flexible suspension system eliminates the transfer of mechanical vibration to the disc, which can have an adverse effect on the sound.



Button for opening and closing the drawer.

(CD and SACD only)

With this button the video section of the **DVD 1235 R** can be switched off.

When switched off the high frequency video signals can not influence the susceptible audio signals. Switching off the video section is recommended for highest possible audio reproduction quality.



This button switches the phase of the signal from normal to inverse phase and back.

The human ear is certainly capable of detecting absolute phase when listening to particular instruments and voices

However, absolute phase is not always correct on commercial recordings, and in this case you can invert it (i. e. turn it through 180°) by pressing this button.

The correction occurs at the digital level and therefore has no effect at all on sound quality.

Note:

The symbol ♣ on the screen glows continuously when INVERSE mode is switched on.



Selection of the oversampling method

Repeatedly pressing this button cyclically steps through the various oversampling algorithms offered by the DVD 1235 R.

For SACD and CD playback each have two different sets of oversampling algorithms. These special algorithms implemented in the **DVD 1235 R** are optimised for each data format.

A detailed description of the oversampling algorithms can be found in chapter **'Technical Description Oversampling'**.



Selects the audio playback mode

SACD

When the disc is stopped this button chooses between the CD or SACD layer of hybrid SACDs.

DVD

During DVD playback: Selection of the DVD sound track (language or audio format), if there are different sound tracks on the disc.

(only P-Scan option)

A long key press (approx. 3 sec.) switches the progressive scan mode for the YUV component video output on and off. Progressive scan increases the picture quality dramatically but it requires a progressive scan capable projector or TV set.

IMPORTANT Note:

Before switching to progressive scan mode, please make sure that your video monitor or TV set is capable of displaying progressive video signals! Please consult the manual of your video monitor or ask the manufacturer.

If the monitor is not capable of displaying progressive video signals, a distorted or no picture at all will be displayed. In this case please <u>immediately</u> switch back to normal video mode.

Note:

The **DVD 1235 R** can be optionally equipped with a state-of-the-art Faroudja ™ video processor with DCDi ® technology.

To optimize the picture quality some video parameters can be adjusted in the menu 'Preferences/Adv. Picture' . Please refer to the chapter OSD MENU



Adjustment of the display brightness

By repeatedly pressing the **DIM** -button the brightness of the alpha-numercal display can be adjusted in 3 steps:

1. Normal setting:

good legibility, even in bright conditions and sunlight.

2. Subdued:

Subdued setting, for dark locations.

3. Display off:

the screen is switched off completely. The screen lights up for a few seconds whenever a command is sent to the unit, so that you can see the new setting.

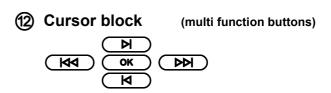


Selection of the **REPEAT**-mode. (see chapter 'Operation of the DVD 1235 R').



A **short keypress** opens the disc menu of a video DVD. (see chapter **'Menu-Functions'**).

A long keypress (approx. 3 sec.) opens the SETUP Menu of the DVD 1235 $R_{\rm c}$.



These multi-function buttons are used for navigation within On-Screen-Menus and for play back control (track jump, cueing etc.)

| | Menu- Navigation | Play Back Control |
|-----|-----------------------|--|
| N K | selection buttons | These buttons are used to jump to the next / previous track, chapter or title. |
| | | For MP3 music discs these buttons select a title within the current directory. |
| | adjustment buttons | Fast Forward / Reverse |
| K4 | | The fast mode is ended by pressing the PLAY button. For MP3 music discs these |
| | | buttons select the active directory on the disc. |
| ОК | confirm button | A short keypress will start the playback or will resume playback after a pause. |
| | | A long keypress will switch to CURSOR-Mode (NAVI- GATION Mode) (see chapter 'Manual Cursor- control'). |



A short press on this button switches the unit to Pause / static picture. Press the PLAY -button to resume playback.

During DVD playback repeated **short presses** of the PAUSE button move on to the next single frame of the film.

Repeated **long presses** (around 2 seconds) during DVD playback switch to different slow motion speeds. Press the (PLAY)-button to stop slow motion.



The **STOP** button ends playback.



A short press on this button starts playback, or resumes playback after a **Pause**.

(6) Screen window

All the screen elements of the **DVD 1235 R** are displayed in a clearly laid-out window on the integral screen:

1 2 3 cd sacd mch ⋈ P ♦ ③

| | , | |
|----------|--|--|
| 1/2/3 | This display area shows the currently active oversampling algorithm (13). If none of the numbers are lit, the standard algorithm (FIR Filter) is active. | |
| CD | is lit if a standard audio CD or the CD layer of a hybrid disc is played | |
| SACD | is lit when a SACD is played | |
| MCH | Glows when a multi-channel SACD is present | |
| × | this indicator is leit, if the video output is switched OFF (pure high quality AUDIO-Mode). | |
| Р | indicates that the P-scan mode (progressive scan) is active for the YUV component video output (only P-Scan option) | |
| * | Glows when the phase of the output signal is inverted. | |
| 123,45 | Alpha-numerical display area for indication of track, time or operation mode. | |
| | This area is also used for context depending messages for example during SETUP menus. | |
| () | This indicator is lit, if the WAKE-UP function is active. (see chapter 'Preferences / Functions / Wake Up Timer'). | |

Note:

In case the message '**DVERHERT**' is displayed on the display, the **DVD 1235 R** has become too hot.

Please make sure that the device is sufficiently supplied with cooling air and that the air can freely flow around the case of the device. Read and follow all instructions given in chapter Setting up the **DVD 1235 R**. Please do not place the **DVD 1235 R** directly on top of other hot devices like amplifiers etc.

Remote control of the DVD 1235 R

General

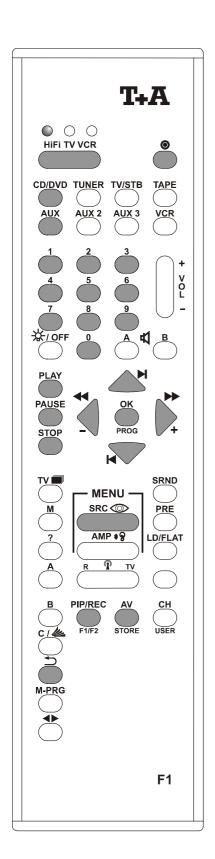
The DVD 1235 R can be remote operated with the **T+A** remote controls **F6** and **F12** or with the system control **F1**.

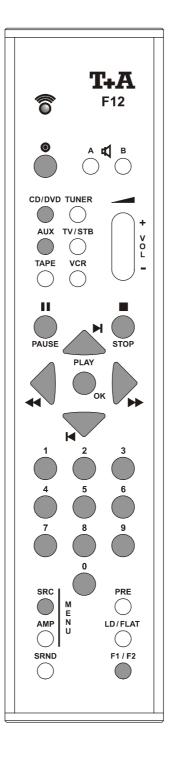
On the following diagrams all buttons used for the control of the **DVD 1235 R** are marked '. All other buttons are without function for the **DVD 1235 R**.

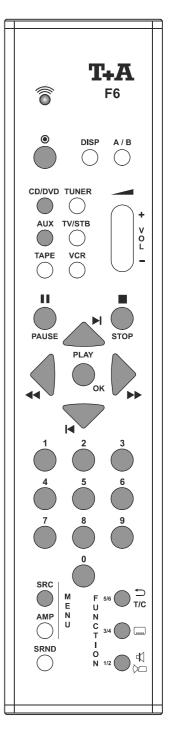
The **DVD 1235 R** receives remote control commands from the **R**LINK –Master device (amplifier or surround-receiver). It is switched ON with the (CD/DVD) button.

Note:

If there is no master unit present, the **DVD 1235 R** can be directly remote operated with the remote control set (FBS12, FBS6) which is available as an optional accessory.







| F1 | F12 | F6 | | |
|---------------|---|-------------------|---|---|
| | | | Switches DVD pla | ayer to stand-by |
| (HIFI TV VCR) | |) | Switch to HiFi control | |
| (CD / DVD) | (CD / DVD) | (CD / DVD) | Switches DVD pla | ayer on, selects DVD as program source |
| | | | - | 1235 R ON, if RLINK 2 nd ADDR = AUX ist selected (switch on |
| (AUX) | (AUX) | (AUX) | back panel) | , |
| PLAY | | | start playback, re- | -start playback after pause |
| | | | In STOP mode: | Starts playback (PLAY) |
| △► | $\triangle^{\!$ | △▶ | During playback: | Selects next title |
| | | | MP3-CD: | Select the next track within an album directory |
| ъ₽ | _k ∇ | ₽ | | Selects previous title |
| | | | MP3-CD: | Select the previous track within an album directory |
| ₩ ∅ | ₩() | ₩() | | Fast rewind / forward |
| > | > ** | > ** | MP3-CD: | Select the album |
| | | | brief press: | Ends following modes: PAUSE / SEARCH / SCAN |
| OK | OK | OK | long press: | Switches to cursor control (see 'Manual cursor control') |
| | | | MP3-CD: | Start playback |
| PAUSE | PAUSE | (PAUSE) | brief press: | Interrupt playback Next individual DVD frame |
| | | | long press: | Slow motion: ${}^{1}I_{2}$, ${}^{1}I_{4}$, ${}^{1}I_{8}$ speed |
| | | | brief press: | End playback |
| (STOP) | (STOP) | (STOP) | long press: | Open drawer |
| 0 | · . | 0 | Number buttons: | direct track / chapter select |
| 9 | 9 | 9 | | |
| 5 | | Ð | select REPEAT m | node |
| PIP | F1/F2 | (≯ □< | brief press: | changes between different sound tracks (languages or DOLB/dts/stereo sound) if there are multiple sound tracks on the disc (same function as WORD) button on the front panel) |
| | | | long press: | Camera view angle |
| | | | brief press: | Open Disc menu (see 'Menu function') |
| (SRC ⑩) | SRC | SRC | long press: | open SETUP on-screen menu |
| AV STORE | | | select sub title lan | nguage |
| N | lenu control | | | |
| N | | In Select menus t | he following buttons are used for navigation within the menu: | |
| • | 4 √ _{♥,} ν >> | | left | up right |
| | | | down | |
| | OK | | Select / confirm b | utton [ENTER] |

Operating the DVD 1235 R

Switching on

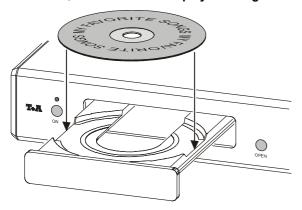
Press the **ON** button on the front panel of the unit. The green indicator LED above the button lights up, as does the display screen. The unit is now ready for use.

For Stereo playback (CD/SACD) switch ON your HiFi system and select the audio input the $\mbox{DVD 1235 R}$ is connected to.

For playback of DVDs select the appropriate digital input of your surround decoder or surround receiver. Switch on your TV set and choose the video input to which the **DVD 1235 R** is connected to.

Loading a Disc

- Press the OPEN button on the front panel to open the drawer.
- 2. Place the disc in the **centre** of the circular recess in the drawer, **with the side to be played facing down**.



Press the OPEN button on the front panel to close the drawer.

Starting playback

Some discs feature an "autostart" function. These discs will start automatically. Other DVDs show an On-Screen-Menu after start-up. Please follow the instructions of the menu.

CD and SACD are started by pressing the PLAY button.

Stopping playback

You can stop playback at any time by pressing the (STOP) button.

Resuming playback

You can resume playback of a stopped CD / DVD / VCD by pressing the PLAY - button on the front panel, or the to ok button on the remote control handset.

RESUME

After loading a previously played DVD/VCD the playback can be continued at the position where the playback was interrupted before. Please press the PLAY / OK button while the 'RESUME' icon is displayed on the screen.

Note:

Some discs suppress the resume function in which case, these discs can only be started from their disc menu. The **RESUME** function is available not only for the DVD played last, but also for the last four DVDs that were played.

Selecting a Chapter or Title

1.) Selecting using a skip button

You can initially select CD tracks, DVD titles or chapters by pressing the skip forward button ♣ or the skip back button ♣ repeatedly until you reach the desired point.

Note regarding DVD:

If the last chapter of a title is reached, the machine skips automatically to the previous or following track.

2.) Selecting using the DVD disc menu

Most DVDs feature a Select menu for titles and scenes in a film. Once you insert a DVD this menu usually appears automatically. During playback the disc menu can be opened at any time by pressing the MENU button on the front panel or the blue SRC button of the remote control briefly (F1: bue SRC Procker).

Select the desired scene in the disc menu and confirm your selection by pressing the ok button. Playback will jump now to the selected scene.

3.) Selecting chapter and track - direct numeric input

Note:

If the number has more than one digit, press the digits quickly in sequence.

SEARCH

The standard search takes place at quadruple speed, and is started by pressing the front panel buttons [Note: 1.5] or the remote control buttons (Note: 1.5] Press the search button again to increase the search speedto 32 times normal speed. The search can be stopped at any time by pressing the (Note: 1.5) button.

The sound is muted during the search process.

SEARCH via the On-Screen-Menu

The search function can also be controlled by the OSD (see 'Menu Toolbar/Search').

REPEAT

button.

The device offers several **REPEAT**-modes for repeating chapters, titles or entire discs:

DVD Chapter / Title / Disc / Off

VCD/CD Title / Disc / Off

MP3 Track / Album / Disc / Off

SACD Title / Area / Off

JPEG Repeat Roll / Repeat Disc

| REPEAT mode | Screen display (short message) | Screen display (persistant) |
|---------------------|--------------------------------|-----------------------------|
| Chapter | REPEAT | RC |
| Title Track | RPT TTL RPT TRK | RT |
| Disc Repeat Disc | RPT DSC | RP |
| Off | RPT OFF | |
| Area Album | RPT ARA RPT ALB | RA |
| Repeat Roll | | RR |

To switch on and select a **REPEAT** mode press the MODE button on the front panel repeatedly until the desired mode is displayed.

| REPEAT | using the F1/F6 remote control handset |
|------------|--|
| • The REPE | AT-modes can be selected with the |

Play back of MP3 / JPEG / Kodak Picture CD

The **DVD 1235 R** can play back MP3, JPEG, VCD and SVCD files from recorded available CD-R/RW discs or from comercially available CDs.

A MP3-CD may contain up to 32 album files (directories) with music titles.

To select an album file use \(\delta \) / \(\bar{\rightarrow} \) buttons on the front panel or the \(\delta \) / \(\bar{\rightarrow} \) buttons of the remote control.

The desired album / title number can alternatively enteres directly using the numerical buttons of the remote control:

- In STOP-mode the number buttons are used for the album selection.
- During PLAY the number buttons select a track within the current album.

Play back of a MP3 title can be paused by pressing the $^{\text{PAUSE}}$ button and be resumed by pressing the $^{\text{PLAY}}$ button.

Note:

Due to the big number of tracks on a MP3 discs it may last a couple of seconds until the disc structure is read and entirely resolved by the player.

Only the first session of Multi-Session-Discs is supported by the ${\mbox{DVD 1235 R}}.$

The following formats are suppoerted:

- CDs according to ISO 9660
- max. 30 characters
- max. 8 directory levels
- max. number of albums: 32
- VBR-bit rate supported
- sampling frequencies for MP3-CD: 32 kHz, 44.1 kHz, 48 kHz
- supported bit rates for MP3-CD: 32, 64, 96, 128, 192, 256, 320 (kbps)

following formats are **not** supported:

- *.WMA, *.AAC, *.DLF, *.M3U, *.PLS
- file names containing chinese symbols
- disks containing sessions not closed (Non Session Closed)
- discs recorded in UDF-format
- files containing ID3V2 tags

Listening to SACD

It exist three types of SACD discs: single layer, double layer and hybrid discs. The hybrid discs contain a standard CD and a SACD layer.

The SACD layer should always contain the music in a pure stereo format. Additionally it may contain the music in multi channel format. Some rare discs however contain only multi channel signals on the SACD layer. The **DVD 1235 R** can play back all of these discs. Please follow the instructions below.

Play back of Super Audio CD (SACD)

Stereo SACD

- The player will automatically select the stereo SACD layer as the default. After reading the disc, the SACD indicator will light up.
- Now the disc may be started by pressing the PLAY button.

SACDs containing a stereo and multi-channel area

- After loading and reading such a disc, the player will automatically select the stereo SACD area as the default. This is indicated by the SACD indicator.
- Start the disc by pressing the PLAY button.

Multi-channel SACDs without stereo track

The **DVD 1235 R** can also play pure multi-channel SACDs, in which case they are reproduced as a two-channel down-mix. This means that all sound information (including that for the rear channels) is reproduced via the stereo loudspeakers, ensuring that no musical information is lost.

Play back of the CD layer of hybid SACD discs

The **DVD 1235 R** can play back both of the SACD and the CD layer of these discs. Switching between CD and SACD layer is accomplished by pressing the button while the disc is stopped. After switching to the CD layer, the "CD" indicator in the display will be lit.

Note:

During play back it is not possible to switch between CD and SACD layers. First stop a playing disc before switching layers.

Compatibility with recordable media

The **DVD 1235 R** can play back recordable and rewritable discs (for details refer to the technical data section of this manual).

Due to the vast number of different disc types, disc manufacturers, disc recorders and software programs a guarantee for compatibility with every software / hardware / disc combination can not be given.

If compatibility problems occur we recommend to use a different type of disc, a different recording device and/or a different software.

Hints for using the DVD 1235 R in combination with SR 1535 R and DD 1535 R

Wire the system according to the diagrams and execute all steps described in the chapters 'Setting up the DVD 1235 R, Wiring and Safety Notes'.

Operation of DD 1535 R (software version > 1.10)

- For DVD (S/VCD) playback choose the DVD input.
- For playback of CDs and SACDs in Stereo mode choose "CD" as source and switch to PREAMP-mode. You will now hear the CD in highest possible sound quality over the excellent D/A converters of the DVD 1235 R and the short direct and audiophile signal paths of your T+A stereo amplifier.
- To play back CDs and SACDs in ProLogic or NEO:6 surround mode choose CD as source and switch your system to SURROUND mode (green SRND button).
 You can now choose the surround mode using the main menu of your DD 1535 R.

Operation of SR 1535 R (software version > 1.20)

- For DVD (S/VCD) playback choose the DVD input.
- For playback of CDs and SACDs in Stereo mode choose 'CD' as source. You can now select a sound mode (Stereo, Surround, Sound Fields etc.) by pressing the green (SRND) button.
- For stereo reproduction in the highest quality, switch to HIGH-QUALITY mode using the FLAT button underneath the flap of the SR 1535 R.



Menu Functions of the DVD 1235 R

General

During operation of the **DVD 1235 R** two different menus are available: the disc menu and the player menu.

The Disc-Menu is stored on the DVD itself. This
menu is intended for selecting and operating special
features of the disc like sound-track, subtitles,
additional information on the film, film trailers, games
etc.

Contents and navigation/operation of the disc menu differ from disc to disc. Normally this menu is operated by the buttons described below. Please follow the instructions given on the screen.

The disk-menu is opened by a brief press of the MENU button on the front panel or the SRC button of the remote control.

The Player-Menu is intended for the control of special functions and settings of the player. This menu is described in detail in the following chapters. The player menu is opened by a long press (approx. 3 sec.) on the MENU button on the front panel or the sec button of the remote control.

The Player menu will be automatically closed after a short while, if no further navigation or button presses are executed.

Menu control

In selection menus the following buttons are used for navigation and selection:

| Remote Control | Front Panel | |
|-------------------|----------------|-----------------------------|
| △► | K | upwards |
| ₩ | A | downwards |
| 44 () | (MA) | left |
| > ** | (KK | right |
| OK | OK | Confirmation button [ENTER] |

DVD / VCD Disc Menu

(menu operation and navigation)

A DVD may contain a Disc Menu with selection facilities for individual **titles** and / or **chapters**. Depending on the DVD, the disc may also contain games, bonus material or alternatives for camera angle, synchronous languages or sub-titles, which can be set or called up via the Disc Menu.

Note:

The contents, appearance and behaviour of the Disc Menu are dictated and controlled by the disc itself. If you encounter problems in connection with the Disc Menu, please contact the manufacturer or retailer of the disc.

Calling up and operating the DISC Menu

The **Disc Menu** can be called up at any time during playback, in order to make adjustments.

 To enter the disc menu, briefly press the MENU button on the front panel or the SRC button of the remote control.

If the DVD contains a Select menu, this now appears on the TV screen. The integral screen displays the message **'INFO'**.

- To select or execute a menu item, press **OK** button **[ENTER**].
- To close the disc menu press the MENU button on the front panel or the SRC button of the remote control.

Opening and closing the menu using the F1 remote control handset

Press the blue (sRC (40) - rocker to call up the Disc Menu.

Press the blue (sRC (40) - rocker again to leave the menu.

Manual CURSOR control

The CURSOR buttons on the remote control handset



are used with the **DVD 1235 R** both to control the functions of the mechanism (skip back, skip forward, search) and also to navigate within menus. The **DVD 1235 R** detects automatically whether you are operating the disc mechanism or finding your way through a menu.

A few DVDs, mostly older and quite rare examples, give the machine no clues whether a menu is currently open, i. e. they do not pass relevant information to the player. With these discs the screen display 'INFO' does not appear when a menu is open, and it is not possible to navigate within the menu. In such cases the DVD 1235 R can be switched to 'Cursor Navigation' mode.

Switching to CURSOR control

Hold the **OK** button pressed in until the message **'CURSOR'** appears on the integral screen. Now even problematic menus can be operated.

Switching off CURSOR control

To revert to normal operation hold the \bigcirc button pressed in again until the '<code>CURSOR'</code> message on the screen disappears.

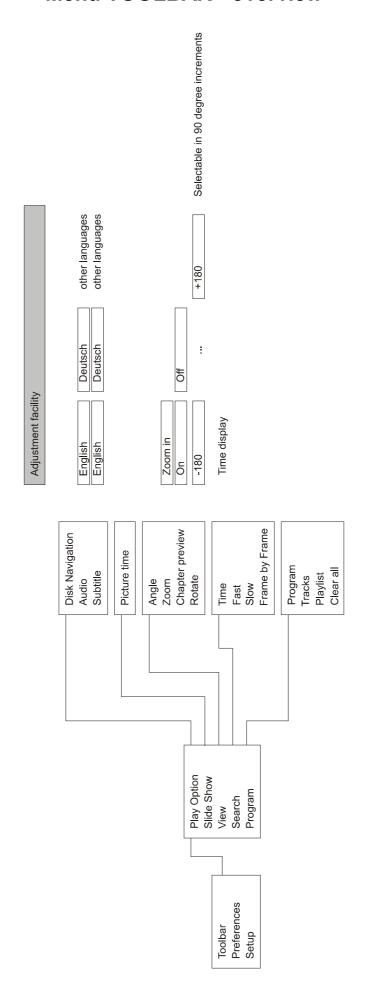
Note:

In Cursor mode the buttons of the control button block carry out menu control functions exclusively.

For normal control of the disc mechanism you must therefore first leave Cursor mode.



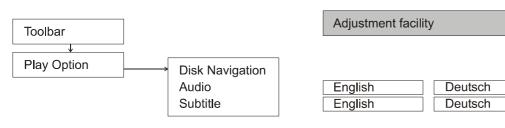
Menu TOOLBAR - overview



Menu Toolbar

In this menu the playback options for the disc can be selected.

Menu Play Option



Disk-Navigation

Submenu for title / chapter selection.

Audio / Subtitle

Submenus for the selection of audio language and subtitle language. Only languages present on the disc can be selected.

other languages

other languages

The default language selection can be set in the menu 'Preference / Language'.

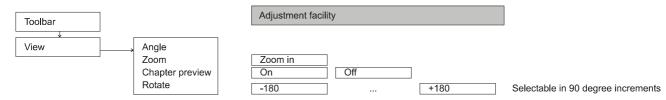
Menu Slide Show (Special menu function for picture-DVDs)



The **DVD 1235 R** can perform an automatic slide show with the content of a JPEG picture CD. This submenu serves to adjust the display time for each slide.

- Slow 8 seconds display time
- Medium 5 seconds display time
- Fast 2 seconds display time

Menu View



Angle

If a DVD contains sequences filmed from different viewing angles, this submenu lets you select one of these angles for playback.

Note: Which angles can be selected (if any) is depending on the content of the disc.

Zoom

The ZOOM function allows you to magnify certain portions of the screen picture.

Chapter Preview (Scan function)

Choosing "**ON**" in this submenu will play a short preview of each chapter on the disc.

Rotate

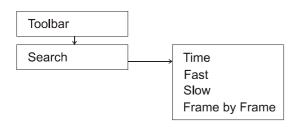
(Special menu function for picture-DVDs)

This submenu lets you rotate the pictures in 90 degree steps to align the orientation of the slides of a piccture CD with the TV.

Note:

This function can not be called during a slide show. All pictures on the disc must have the same orientation.

Menu Search



Adjustment facility

Time display

Time

This submenu lets you enter a time position on the disc where playback shall be started.

Use the numerical buttons of the remote control to enter hour, minutes and seconds. Then press ok to confirm your selection. Playback will now start at the selected position.

Note:

This function is not available for VCD / SVCD.

Fast

Here you can select the speed for fast forward search. During search the audio output will be muted.

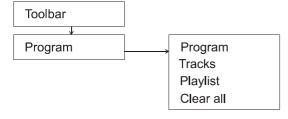
Slow

Here the slow motion mode can be activated. Choose 1 to return to playback at normal speed. During slow motion mode the audio output will be muted.

Frame by Frame

Choosing this menu item will let you step through a film frame by frame. Use the ◄﴿ / / ▶ buttons to step backwards or forward.

Menu Program



Adjustment facility

You can play back the contents of a disc in your preferred order by programming the order of the tracks to be played.

Program

This submenu displays the titles already programmed. Choose the setting 'ON' and then press the ▶ button.

Tracks

This submenu lets you enter tracks into a playlist for the disc in the player.

In the selection window on the screen navigate to the desired track and select it by pressing the w button. In this way a playlist with up to 20 tracks can be created.

Playlist

This submenu lets you edit a playlist and remove tracks from it.

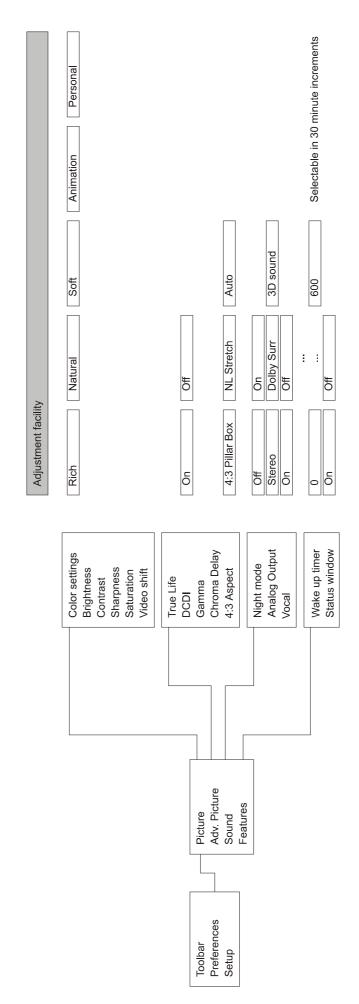
Enter this submenu and choose a track to be deleted. Confirm your selection by pressing the button. This removes the track from the list.

Clear All

If you want to delete the complete playlist, choose the menu entry "Clear All" and press the >>> button to confirm. The current playlist will now be deleted.

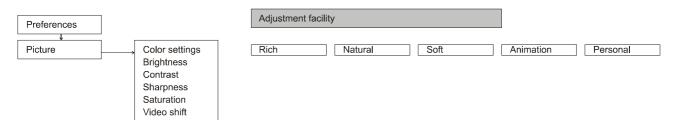


Menu Preferences - overview



Menu Preferences

Menu Picture



The menu Picture lets you adjust the picture parameters to your personal preferences.

Color Settings

(will not influence the YUV Component video output)

In this menu you have the choice between different predefined color settings or one adjustable setting (personal).

Brightness / Contrast / Sharpness / Saturation

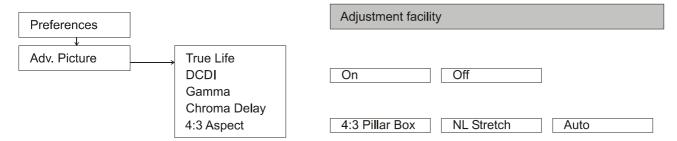
(will not influence the YUV Component video output)

Use these submenus to adjust all picture parameters to your personal taste. These adjustments will only influence the display monitor if the "personal" color setting is selected in the menu above.

Video Shift

The video shift function can be used to change the horizontal position of the picture and to center the picture on the screen.

Menu Advanced Picture (for YUV-video-output only) (only P-Scan option)



True Life (for progressive scan output only)

Generates a more dynamic picture by increasing the contrast and saturation of the picture.

DCDi (for progressive scan output only)

DCDi computes the angle of certain picture contours to interpolate additional video pixels. **'On'** increases dramatically the picture quality, especially during slow motion.

Gamma

This submenu offers a non-linear processing of the picture intensity. Setting the slider in the right hand input box to a positive value will enhance fine details in dark scenes whereas a negative value will increase the contrast of the picture.

Chroma Delay

If the chroma (colour) and luma (brightness) signals are not perfectly aligned (due to phase delays in the signal transmission), the chroma delay setting can be used to eliminate misalignments. Adjust this value to obtain a perfect clear and sharp picture.

4:3 Aspect (for progressive scan output only)

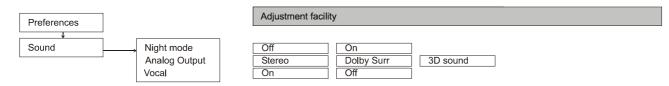
Use this submenu to adjust the aspect ratio to the geometry of your video monitor.

4:3 LB (letter box) use this setting for 4:3 material on a 16:9 screen (without stretching)

NL-Stretch (non linear stretching) for display of 4:3 pictures on a 16:9 screen with non linear stretching. The outermost parts of the picture are progressively stretched, central parts of the picture are not altered. This feature gives a full screen picture format without black stripes and warping in the central parts of the screen.

Auto no adjustment of the aspect ratio. The picture is displayed exactly in the format stored on the disc.

Menu Sound



In this menu the basic settings for the sound reproduction are adjusted.

Night mode

Off The sound is reproduced with full dymanics.

The difference between loud and soft passages may be very high.

On Sound reproduction with decreased dynamics.
Loud passages will be played at a lower volume, during soft passages the volume is increased a little bit, especially in the dialog track. This mode decreases the difference between extremely loud and soft sequences. This sound mode is recommended, if neighbours or other members of the family should not be disturbed.

Analog Output

Sets the operation mode of the analogue Stereo output of the **DVD 1235 R**.

Stereo If stereo is selected multichannel sound tracks are down-mixed to stereo and output through the L/R front outputs of the main analogue output.

Please use this setting if your DVD 1235 R is connected to a stereo amplifier.

Dolby Surr Use this setting if your DVD 1235 R is connected to a Dolby-ProLogic decoder. Multichannel soundtracks will be output through the L/R outputs of the analogue output of the DVD 1235 R in a Dolby ProLogic downmix version.

3D sound This setting will produce an artificial vitual surround signal which can be played back through normal 2-channel stereo amplifiers.

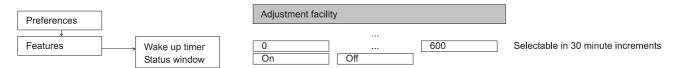
Vocal (Karaoke)

Allows the playback of multichannel Karaoke DVDs.

ON Karaoke channels are mixed to a normal stereo signal. Music and vocal channels of the recording are played back.

OFF The vocal channel of the recording is muted.

Menu Features



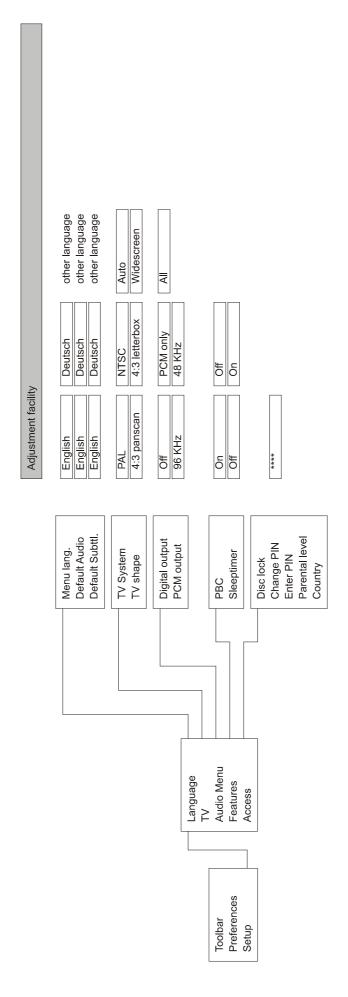
Wake up timer

The DVD 1235 R will be switched on at the selected period of time. If the wake up timer is active the timer-LED in the display window will light up.

Status window

If the status window is switched on, the current operation mode and time information is displayed on the screen of the video monitor.

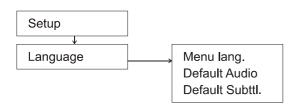
Menu SETUP - overview



Menu Setup

If the SETUP menu is opened during playback, the disc is stopped. The playback will continue after closing the SETUP on screen menu.

Menu Language



Adjustment facility

English
Deutsch
English
Deutsch
Deutsch
other language
other language
other language

In this menu you can select the default values for the languages for sound track, subtitles and On-Screen-Menus.

Menu language

In this submenu you can select the language for the On-Screen SETUP menu.

Default Audio

Here you can select your preferred language for DVD soundtracks. The **DVD 1235 R** will play back a DVD in this language, if it is available on the disc.

Note:

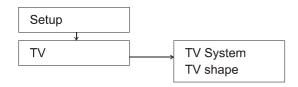
The **DVD 1235 R** will use the default language of the disc, if your preferred language is not available on the disc

Default Subttl.

In this menu you can select your preferred language for subtitles. If available on the disc the **DVD 1235 R** will show subtitles in this language.

It will use the default subtitles, if your preferred language is not available on the disc.

Menu TV



Adjustment facility

| PAL | NTSC | Auto |
|-------------|---------------|------------|
| 4:3 panscan | 4:3 letterbox | Widescreen |

TV-System

The **DVD 1235 R** is compatible with both NTSC and with PAL video monitors.

PAL

Use this setting, if the picture shall be displayed on a PAL TV. DVDs in NTSC format are converted to PAL by the **DVD 1235 R** and output in standard PAL video mode.

NTSC

Use this setting, if the picture shall be displayed on a NTSC TV. DVDs in PAL format are converted to NTSC by the **DVD 1235 R** and output in standard NTSC video mode.

AUTO

If you select this setting, the **DVD 1235 R** will not convert signals between PAL and NTSC. All video signals will be output in exactly the format in which they are stored on the disc. Using this setting your TV must be compatible to the video standard of the disc which you want to play back.

We recommend this setting, if you use a multi standard TV set, which automatically detects the video standard and processes viodeo signals accordingly.

Note:

Picture distortions can occur when switching between NTSC and PAL. $\label{eq:poccur} % \begin{center} \begin$

TV shape

This submenu lets you adjust the picture output of the **DVD 1235 R** to the geometry of your TV set.

Note:

The format selected must be available on the disc. Otherwise this setting will not have any influence on the picture display.

4:3 Pan Scan

For reproduction of a wide screen movie on a 4:3 TV without black top and bottom stripes. The left and right edges of the picture are slightly clipped.

Note: Pan Scan is not supported by all DVDs.

4:3 Letter Box

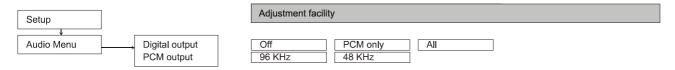
For wide screen reproduction on a 4:3 TV set with black top and bottom stripes.

Widescreen

For reproduction on a wide screen (16:9) TV set.

| Optimum pictures on any screen | | |
|--------------------------------|--------------|------------------------|
| | Video format | Film format |
| Original material | | 000 |
| Material on Disc | | |
| | | Pan-Scan or |
| | | distorted (anamorphic) |
| TV picture | | |
| TV picture | | 500 |
| 4:3 | | |
| | Normal | Pan-Scan |
| | | |
| | | Letterbox |

Audio Menu



In this menu the basic configuration for the audio output is done.

Note:

Digital output signals are not available when playing a SACD.

Digital output

Here the format for the digital audio output of the **DVD 1235 R** can be chosen. Please select the format that complies with your surround decoder / receiver

Off The digital audio output is switched off

PCM only Select this setting if your receiver / amplifier can only handle digital 2-channel signals. Multi channel formats (Dolby Digital, dts, etc.) are output as a 2-channel stereo downmix.

All Recommended setting in combination with a **T+A** surround decoder or receiver.

Choose this setting if a multichannel decoder is connected to the digital output of the **DVD 1235 R**. Multichannel recordings are output as a digital multichannel data stream that can be decoded by the attached surround decoder / receiver.

PCM output

In this submenu the 96 kHz digital output format can be enabled.

If you have selected 96 kHz output, DVDs with a 96 kHz / 24 bit audio format are output directly in this format without conversion. The highest audio quality is acheived in this mode.

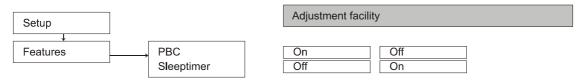
Attention:

The decoder / amplifier or receiver attached to the digital output must be compatible with the 96 / 24 format. If this is not the case, select the 48 kHz format for the digital output.

Enabling the 96 kHz option for non compatible decoders / receivers can lead to damages of your amplifier/speaker system!

For **T+A** decoders and surround receivers the 96/24 bit format can be selected without restriction.

Menu Features



PBC

The play back control function can be set to 'On' or 'OFF'. If 'On' is selected, the disc menu (if available on the disc) can be accessed and will displayed on the TV. Note: This function is available for video CDs (VCD) version 2.0 only

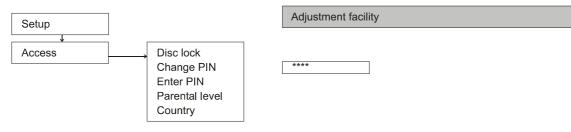
Sleeptimer

The Sleeptimer, if switched on, will switch the **DVD 1235 R** OFF, if the playback is stopped for more than 20 minutes.

Menu Access

To gain access to the submenus of this menu, you must enter your four digit PIN number first in the submenu **'Enter PIN'**.

The factory setting for the PIN code 0000. This code can be changed any time (see 'Change PIN'). In case you have forgotten your PIN number, please follow the instructions given in chapter 'Trouble shooting'.



Disc lock

You can lock certain of your DVDs to prevent unauthorized playback of these discs.

After a DVD is locked, you will be prompted for your PIN number before this DVD can be started. Without a valid PIN number this DVD will not be played back on this player.

Change PIN

First enter your PIN number in submenu 'Enter Pin'.

Then navigate to the 'Change PIN' submenu. Here enter your PIN number once again. After that enter your new PIN number twice.

The new PIN number is now valid. Please rember this PIN number well.

Enter PIN

Enter your four digit PIN code in the input box. After entering a valid PIN number all other submenues of the ACCESS menu will be accessible.

Note:

The factory default PIN number is 0000

Country

Access level codes (Parental Level) are only valid for the country specified on the disc (set by the disc manufacturer). For this reason it might be necessary to set the access level for certain discs manually.

Parental level

Some DVDs have a children's access control which can block some scenes or the entire disc from viewing.

In this submenu you can enter an access level for the disc in the player. This level will be stored for this disc. From now on scenes of this disc with a level higher than the level you have entered will not be played or will be replaced by alternative scenes (if available on the disc).

Note:

VCD-, SVCD- or CD-Discs as well as most illegal DVD copies do not have a parental level feature.

Explanation of the parental level codes:

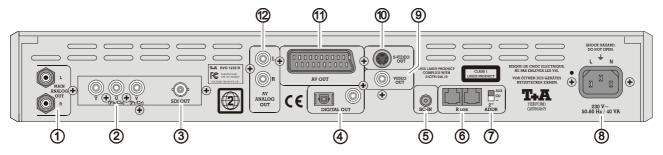
- 8 Suitable for adults only, not to be viewed by children.
- 7 Not suitable for children under 17.
- 6 Viewing with supervision by adults; it is recommended that children under 17 should not watch these discs without the presence of a parent.
- 4 Not suitable for children under 13.
- 3 Viewing with supervision by a parent recommended.
- 1 Suitable for all ages.
- no parental level control available on this disc.



Installation Using the unit for the first time Safety notes

This chapter describes all the matters of fundamental importance for setting up and operating your DVD player. This information is not relevant to your daily handling of the system, but should still be read and noted carefully before using the machine for the first time.

Back panel connections



(1) MAIN ANALOG OUT

The analogue output of the DVD video player supplies a fixed-level output signal. It is designed for connection to a pre-amplifier, integrated amplifier or receiver with its own volume control.

The output sockets should be connected to the corresponding (L/R) AUX input sockets (INPUT) of the preamplifier, integrated amplifier or receiver.

'ANALOG OUTPUT L' to 'INPUT L' 'ANALOG OUTPUT R' 'INPUT R' to

(2) YUV video output

This video output deliveres high quality YUV (P Pb Pr) output signals. Use this output to connect a video projector/monitor with YUV input.

Important Note (only P-Scan option):

The YUV output can be set to "progressive scan" operation with the P-Scan switch on the front panel. In progressive mode full frames instead of half frames are output by the YUV output. This gives a far better picture quality. monitor/projector used must be compatible with progressive video! (please refer to the manual of the video monitor/projector)

(3) SDI OUT (Serial Digital Interface - optional)

Professional digital video interface (can be retro-fitted). The SDI connection to a video projector/monitor with SDI input guarantees a lossless video transmission even over long cable runs.

(4) DIGITAL OUT SURROUND

Optical digital output for connecting a digital surround decoder.

Co-axial digital output for connecting a digital surround decoder. Please be sure to use high-quality 75 Ω cable with Cinch connectors.

Note:

Digital PCM (DVD, CD, S-VCD, MP-3) and AC3 / dts signals are present at this output. The data format can be selected in the 'Setup / Audio Menu / Digital Output' menu. For copy protection reasons SACD signals are not present in digital form.

(5) RC-IN

Input socket for external IR (infra-red) remote control receiver E2000 (* optional accessory) or external remote device such as a programmable key pad.

(6) RLINK

Control input / output sockets for the **T+A R**LINK system:

Both sockets are wired identically - either of the two sockets can serve as input, while the other can then be used as output to the next RLINK device.

7 RLINK 2nd ADDR.

Toggle switch for the selection of the remote control address of this device within a **T+A-R**LINK system.

Note:

If no CD player is operated within the **T+A** 'R' system, the 'RLINK 2nd ADDR.' switch of the DVD 1235 R should be configured to the additional CD address (position switch position = 'CD')

In this case the stereo output ② should be connected to the CD input of the pre- or integrated amplifier. The ⑤ button will then select the DVD 1235 R for normal stereo CD play back, the DVD button will select the DVD 1235 R for DVD play back. The unit will respond to remote control signals for both of the CD and DVD inputs.

If a stereo CD player is present in the system, please set the switch to position '-'. The **DVD 1235 R** now will only respond to remote control signals if the input DVD is selected as source.

(8) Mains input

The mains power lead is connected to this socket. For details of a correct mains connection please read the notes in the chapter 'Installation, *Using the unit for the first time, Safety notes*'.

VIDEO OUT

Video output for TV sets, video recorders or other equipment with standard composite (CVBS) video inputs.

® S-VIDEO OUT

Output socket for TV sets, video recorders or other equipment with S-Video (S-VHS) video inputs.

(1) AV OUT (SCART)

Socket for for TV sets, video recorders or other equipment with SCART audio/ video inputs.

This socket delivers additional to standard composite (CVBS) video signals the high quality RGB component video signals. To achieve the best possible video performance, please select the RGB mode at your TV/monitor if this device is capable of processing these signals.

(12) ANALOG OUT

Stereo audio output for TV sets, video recorders or surround decoders.

Setting Up the DVD 1235 R

Carefully unpack the **DVD 1235 R** and store the original packing materials carefully. The carton and packing are specially designed for this unit and will be needed again if you wish to move the equipment at any time. Please be sure to read the safety notes in these instructions.

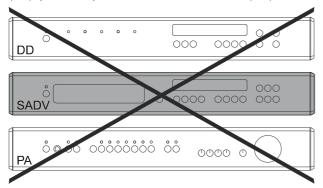
If the unit gets very cold (e. g. when being transported), condensation may form inside it. Please do not switch it on until it has had plenty of time to warm up to room temperature, so that any condensation evaporates completely.

Before placing the unit on a sensitive surface, please check the compatibility of the lacquer and the unit's feet at a non-visible point. Fit a layer of protective material if necessary.

The unit should be set up on a rigid, level base. If you are placing the unit on resonance absorbers or de-coupling components, make sure that they do not com-promise its stability.

The unit should be set up in a dry, well-ventilated site, out of direct sunlight and away from radiators and other heaters. It must not be located close to heat-producing objects or devices, or anything that is heat-sensitive or highly inflammable.

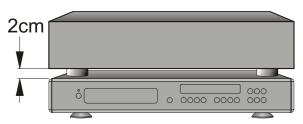
The **DVD 1235 R** player must never be set up between heat-generating devices such as integrated amplifiers (PA), power amplifiers or surround decoders (DD).



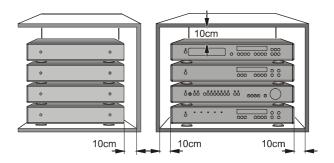
The **DVD 1235 R** should never be placed on top of an amplifier or any other device that can become hot during operation.

Either place the device at the side of other equipment or on top of cool devices like tuners, pre-amps etc.

'R' series devices dissipate some of their heat via the case cover. For this reason units of any other make which are placed on top of a **T+A** 'R' series device must stand on feet at least 2 cm high.



When installing the unit on a shelf or in a cupboard it is essential to provide an adequate flow of cooling air, to ensure that the heat produced by the unit is dissipated effectively. For this reason there must be at least 10 cm free space to both sides and behind the units. There should also be 10 cm above the case to the next cupboard or shelf.





Any heat build-up will shorten the life of the DVD player, and could be a source of danger!

Mechanical de-coupling

The area on which you set up your high-quality Hi-Fi equipment, and the actual surface on which it stands, have an influence on the achievable sound quality which should not be under-estimated. The surface should be as heavy, stable, hard and flat as possible. The unit is supplied with the newly developed **T+A** conical absorber feet. These feet feature internal damping characteristics which de-couple the player extremely effectively from the base surface.

Note:

The **T+A** absorber cones can be screwed in or out to compensate exactly for any unevenness of the base surface.



The unit must be adjusted carefully so that it is exactly horizontal in all directions. All the feet must make firm contact with the base surface; the unit must not 'wobble'!

Wiring

Notes on wiring

- · You will find wiring diagrams on the following pages.
- Make all connections as shown in the wiring diagrams.
- Push all connectors firmly into their sockets. Loose connections can cause humming and other unwanted noises.
- Please also make all necessary adjustments like input assignments etc. on your surround amplifier or surround receiver.
- Deploy the mains and loudspeaker cables and the RLINK lead as far as possible from signal interconnects and aerial leads.
- Connect the machine to a properly earthed mains socket using the mains lead supplied.
- To obtain maximum interference rejection the mains plug should be fitted in the mains socket with phase connected to the mains input socket contact which is marked with a dot (●). The phase of the mains socket can be found using a suitable instrument; ask your specialist dealer for details.

We recommend the use of the ready-made **T+A 'POWER LINE'** mains lead in conjunction with the **'POWER BAR'** mains distribution panel; this unit features
a phase indicator as standard.

Once the system is completely wired, set the volume control to a very low value and switch the player on.

The integral screen of the **DVD 1235 R** should now light up, and the player should respond to control commands.

Place an audio CD in the disc drawer, and press the (PLAY) button to start playback.

Switch the amplifier to the source device **'CD'**, switch on the loudspeaker output, and you should hear the CD.

If you encounter problems when using the player for the first time, please note that they often have simple causes that are equally simple to correct. Read the chapter entitled '*Trouble-shooting*' in these instructions.

Loudspeaker and signal cables

The cables employed in any Hi-Fi system have a crucial influence on the sound of the system as a whole. **T+A** therefore recommends the use of high-quality cables and connectors.

For this reason **T+A** has developed its own range of cables which includes the ideal type for every application. These cables are designed to match the special characteristics of our loudspeakers and har-monise perfectly with them.

For difficult and cramped set-up conditions you can also use special-length cables and right-angle connectors from the **T+A** range of accessories. With these items you can solve virtually any problem concerning con-nections and set-up.

Mains leads and mains filters

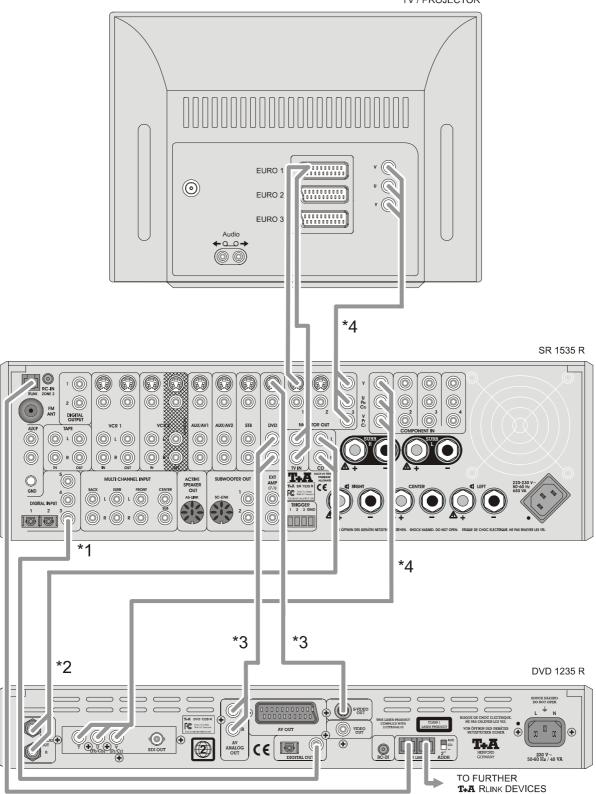
The mains power supply carries the essential energy to operate your equipment, but also often carries interference from distant equipment, radios and computer systems.

To shield your equipment from electro-magnetic interference, our accessory range includes the specially shielded 'POWER FOUR' mains lead, the ready-made 'POWER LINE' mains lead with integral wrap-around filters, and the 'POWER BAR' filtered mains distribution panel. Using these accessories can in many cases improve the reproduction quality of our equipment.

For any questions concerning cables and wiring please contact your local **T+A** specialist dealer, who is trained to provide comprehensive and unbiased assistance. We will also be delighted to send you a full information pack on this subject.

Wiring diagram 1: DVD 1235 R and SR 1535 R with S-Video and Component YUV Video

TV / PROJECTOR



- *1 used for Dolby/dts playback through SR 1535 R
- *2 for high-quality Stereo CD/SACD playback
- *3 S-Video+2channel audio is needed for VCR recordings and Zone 2
- *4 additional YUV-ComponentVideo-cable for Video monitors/projectors with component video input

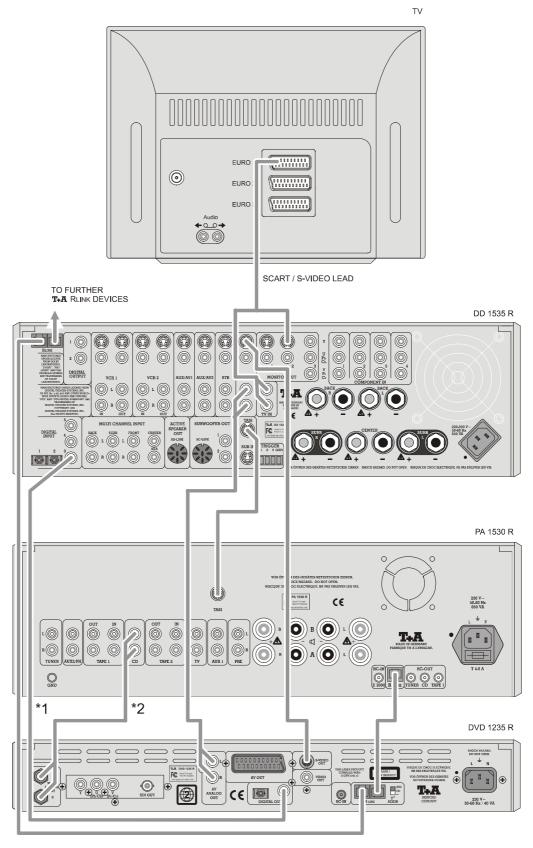
Note:

Please make the following assignments in the configuration menus of the SR 1535 R:

Audio Inputs: DIG-3 (coax) \rightarrow DVD YUV-Inputs: YUV1 \rightarrow DVD Video-Inputs: DVDin \rightarrow S-Video

The switch **RLINK** 2nd ADDR. on the back panel of the **DVD 1235 R** must be set to position 'CD'.

Wiring diagram 2: DVD 1235 R in combination with DD 1535 R und PA 1530 R (S-Video-mode)



^{*1} for Dolby/dts playback through **DD 1535 R**

Note:

Please make the following assignments in the configuration menus of the ${\bf DD}$ 1535 ${\bf R}$:

Audio Inputs: DIG-3 (coax) → DVD → S-Video Video-Inputs: DVDin

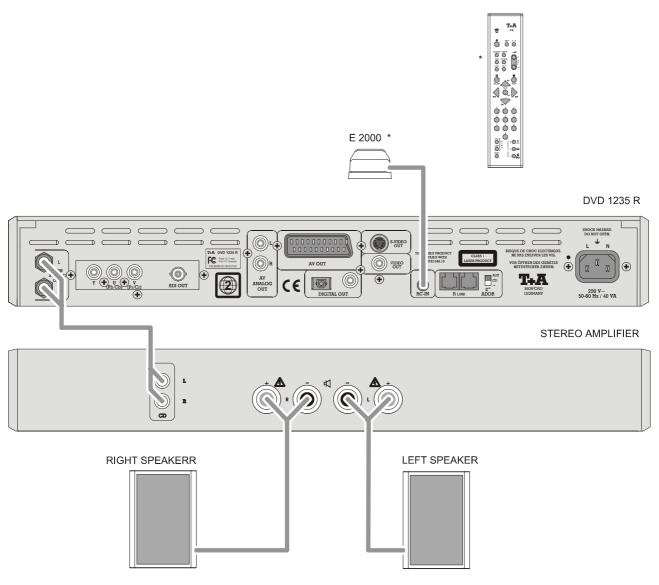
The **DD 1535 R** should be equipped with a software version > V1.10 The switch **RLINK** 2^{nd} ADDR. on the back panel of the **DVD 1235 R** must be set to position 'CD'.

^{*2} for high quality Stereo CD/SACD playback

If the **DVD 1235 R** is to be operated in a non-**T+A** system, the **E 2000** remote control receiver must be connected to the **RC-IN** socket if you wish to remote-control the player.

In this configuration the **DVD 1235 R** is switched ON with the **source button** (**CD/DVD**). The switch **RLINK** 2^{nd} ADDR. must be set to position 'CD'.

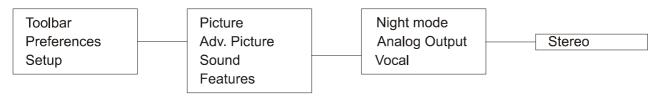
Wiring diagram 3: DVD 1235 R connected to a stereo amplifier



^{*} optional accessories

When playing back multichannel SACDs switch to STEREO operation (button on the front panel).

For DVD playback: Choose 'Stereo' in the setup menu:





Safety notes

All components used in this device meet the current German and European safety norms and standards. For your own safety please be sure to read right through these operating instructions. It is especially important to observe the safety notes and the instructions regarding setting up and operating the equipment.

We are able to guarantee that our products are of the highest quality, and meet all our specifications in full, because we carry out strict quality checking of all materials, employ painstaking production methods controlled by highly qualified staff, and carry out a fully automatic, computer-controlled final quality control procedure.

Please read right through these operating instructions carefully before you attempt to use your new equipment. Note in particular the information regarding setting up and operating the unit, and the safety notes.

The machine must be set up in such a way that there is no chance of anyone - especially children - touching the back panel connections. Be sure to observe the notes and instructions in the chapter entitled 'Installation, Using the unit for the first time, Safety notes'.

The power supply required for this machine is printed on the mains supply socket. The unit must never be connected to a power supply which does not meet this specification. If the machine is not to be used for a long period, disconnect it from the mains supply at the wall socket.

Mains leads must be deployed in such a way that there is no danger of damage from furniture, or people treading on them etc. Take particular care with mains plugs, distribution panels and the connections on the back panel of the player.

Liquid or foreign bodies must never be allowed inside the case through the ventilation slots. Mains voltage is present inside the unit, and there is a risk of lethal electric shock.

Protect the unit from drips and splashes of water; never place flower vases or other vessels containing fluids on top of the case.

Do not exert undue force on the mains connectors.

Caution!

The mains button is not a mains isolation switch. Even when the green LED is not glowing, parts of the machine remain connected to the mains power supply. If the machine is not to be used for a long period, we recommend that you isolate it from the mains by pulling out the plug at the wall socket.

This device should never be used without proper supervision. The machine should be set up well out of the reach of small children. This applies to all electrical equipment.



CAUTION! LETHAL DANGER!

The unit should only ever be opened by a qualified specialist technician.

Repairs and fuse replacements should be entrusted to an authorised **T+A** specialist workshop.

With the exception of the connections and procedures described in these instructions, no work of any kind may be carried out on the machine by unqualified persons.

If the unit is damaged, or if you suspect that it is not functioning correctly, immediately disconnect the mains plug at the wall socket, and ask an authorised **T+A** specialist workshop to check it.

The unit may be damaged by excess voltage in the power supply, the cable network or aerial systems, as may occur due to static discharge or during thunderstorms (lightning strikes).

Special power supply units and excess voltage protectors such as the **T+A 'Power Bar'** mains dis-tribution panel offer some degree of protection from damage to equipment due to the hazards described above.

However, if you require absolute security from damage due to excess voltage, the only solution is to disconnect the unit from the mains power supply and any aerial systems.

If you believe there is a danger of excess voltage (e. g. when an electrical storm is building up) disconnect the machine from the mains and the aerial socket.

All mains power supply and aerial systems to which the unit is connected must meet the currently valid regulations, and must be installed by an approved electrical installer.

Note:

Many insurance companies offer lightning damage cover for electrical equipment as part of their general household insurance.

Approved usage

This device is designed exclusively for reproducing sound and/or pictures in the domestic environment. It must be operated in a dry indoor room which meets all the recommendations stated in these instructions.

Where the equipment is to be used for other purposes, especially in the medical field or for any purpose where safety is an issue, it is essential to establish the unit's suitability for this application with the manufacturer, and to obtain prior written approval for such usage.

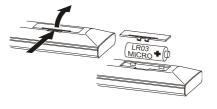
T+A equipment which includes a radio or television receiving section must be operated within the regulations laid down by the Post Office and the Tele-communications authorities in the country in which it is used. This unit may only be employed to receive or reproduce those transmissions which are intended for public consumption. The reception or reproduction of other transmissions (e. g. police radio or mobile radio broadcasts) is prohibited.



The only permissible method of disposing of this product is to take it to your local collection centre for electrical waste.

Fitting new batteries:

To open the battery compartment disconnect the latch by pressing in, then lift the cover out. Remove the old cells and fit new



dry cells of the LR 03 (MICRO) type in the battery compartment, taking care to fit them with correct polarity. Please remember that all the cells must be replaced at the same time.

Note:

If you have already re-set the remote control system to Address 2, you will need to repeat the change procedure after fitting new batteries.

Note regarding disposal of exhausted batteries:

Exhausted batteries must not be thrown in the ordinary domestic waste! In accordance with the battery decree (BattVO) they should be returned to the battery supplier or to your local toxic waste collection point, so that they can be recycled or disposed of safely. Local councils are obliged to make collection containers available, or to make other arrangements for collecting exhausted batteries.

Care of the DVD player:

Always disconnect the unit from the mains supply before cleaning it.

The surfaces of the case should be wiped clean with a soft, dry cloth only.

Never use abrasive or solvent-based cleaners!

Before switching the unit on again check carefully that no short-circuits exist at the terminals, and that you have not disturbed any connections.

Device approval and conformity with EC directives

In its original condition the unit meets all currently valid German and European regulations. It is approved for use as stipulated within the EC.

By attaching the C€ symbol to the machine, **T+A** declares its conformity with the EC directives **89/336/EEC**, amended by **91/263/EEC** and **93/68/EEC**, and **73/23/EEC**, amended by **93/68/EEC**, and the national laws based on those directives.

The original, unaltered factory serial number must be present on the outside of the unit, and must be clearly legible. The serial number is a constituent part of our conformity declaration and therefore of the official approval for operation of the device.

The serial numbers on the device and in the original **T+A** documentation supplied with it (in particular the inspection and guarantee certificates), must not be removed or modified, and must match exactly.

Infringing any of these conditions invalidates **T+A** conformity and approval, and the unit may not then be operated within the EC. Improper use of the equipment renders the user liable to penalty under current EC and national laws.

Any modifications or repairs to the unit, or any other intervention by a workshop or other third party not authorised by **T+A**, invalidates the approval and operational permit for the equipment.

Only genuine **T+A** accessories may be connected to the DVD player, or such auxiliary equipment which is itself approved, and fulfils all currently valid legal requirements.

When used in conjunction with auxiliary devices or as part of a system, this device may only be used for the purposes stated in the section entitled 'Approved usage'.

FCC Information to the user

(for use in the United States of America only)



Class B digital device – instructions:

tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different form that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Explanation of terms, useful information



DVDs can be recognised by the logo shown here.

DVDs have a very high storage capacity, and offer top-quality picture and sound reproduction.

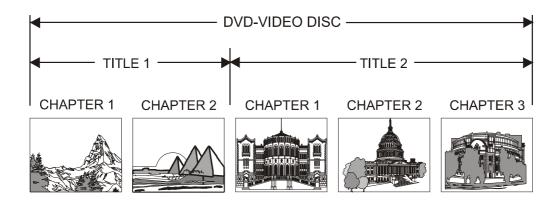


Video CDs (VCD) can be recognised by the logo shown here. They also provide digital picture and sound information, but their lower storage capacity means that they do not quite attain the quality of DVDs.

Depending on the type of material stored on the DVD or VCD (cinema film, video clips, film trailers, information, bonus material etc.) the disc may contain one or several titles. Each title may be sub-divided into several **Chapters**. These chapters allow direct access to individual film scenes.

For historical reasons titles on a VCD are also known as **tracks**, and chapters as an **index**.

This DVD player provides simple, convenient access to any title or chapter by means of the on-screen control bar



Important notes

The actual behaviour of any particular DVD is determined by the disc manufacturer. Different DVDs may vary considerably in their menu operation and running characteristics (e. g. resume, skip back to menu, end of playback at end of title etc.).

These operating instructions can only describe the basic "normal behaviour".

If a DVD does not conform to this, please follow the DVD manufacturer's instructions, as displayed on the TV screen.

Some DVDs feature a regional code implanted by the manufacturer, designed to limit the use of these discs to particular regions of the world. The **DVD 1235 R** plays all DVDs intended for the region the unit is intended for and all DVDs which feature no regional restriction.

If you insert a DVD in the disc drawer, and see a note on the screen informing you of an incorrect regional code, please contact your DVD supplier and exchange the DVD for a version approved for your region.

CD

A Compact Disc (CD) is a digital data medium that requires a little care in handling:

 The surface of a CD may only be cleaned using a soft, dry cloth. Wipe in straight lines from the centre towards the edge.



- Never use petrol, paint thinners, disc cleaning fluids or similar agents.
- CDs must be handled with care to avoid major damage to the surface. Severely scratched surfaces, writing on the discs, or sticking labels on the discs may result in a CD that can no longer be read.
- CDs should not be heated or bent. Choose a storage site that fulfils these requirements.

DSP (Digitaler Signal Prosessor)

The **DVD 1235 R** features a freely programmable signal processor. A DSP can process digital signals in any way, and that is why they allow better oversampling rates than standard modules.

DVD



DVD video exploits the latest state of MPEG 2 data compression technology, which makes it possible to store an entire cinema film on a single 12 cm CD.

The variable bit rate compression of the DVD, with a read speed of up to 9.8 Mbit per second, is capable of recording even the most complex images in their original quality. The crystal-clear digital pictures have a horizontal resolution of 720 pixels (points) over more than 500 lines. This resolution is twice as high as that of the VHS system, is better than that of LaserDisc, and is directly comparable to the resolution of digital master recordings made in recording studios.

DVDs are produced to meet either the PAL or NTSC video norm. This multi-norm playback device is suitable for reproducing both types, and plays them in the best possible quality on your multi-norm TV set. Speech barriers are a thing of the past, thanks to sound tracks in up to eight languages, and sub-titles - if present on the disc - in up to 32 languages. And whether you watch DVDs on a wide-screen or conventional television, the quality will always be the same as when you originally viewed the film at the cinema.

FTS

The **FTS title select program** gives the user the opportunity to change the sequence of playback of the tracks on an audio CD. The selection is made and played using the "OSD" menu.

Camera angle

3/7



Many DVDs and VCDs contain scenes which were recorded using different camera view angles. When such a disc is played back, the screen displays a symbol which indicates the number of available angles

(e. g. 7) and the currently selected angle (e. g. 3). The **DVD 1235 R** can easily be switched to any of the different camera viewing angles.

Menu function

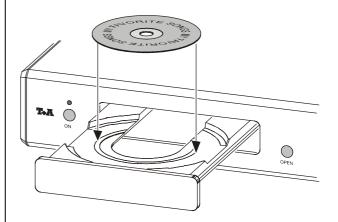
A DVD may contain a Disc Menu with selection facilities for individual **titles** and / or **chapters**. Depending on the DVD, the disc may also contain alternatives for camera angle, synchronous languages, sub-titles etc. The menu function of the DVD player enables you to select these options from the Disc Menu.

SHUFFLE

In Shuffle mode the tracks of a CD or the titles of an FTS program can be played back in a randomly selected order.

CD SINGLES

CD singles are discs of smaller diameter and correspondingly shorter playing time. The **DVD 1235 R** is capable of playing CD singles. To load a CD single place the disc in the circular depression in the centre of the drawer.



TOC

Internal index (TABLE OF CONTENT) of a CD. If the TOC area of a CD is unreadable due to damage, scratches etc., the entire CD is rendered unusable.

TRACK

Track is another termed used for a title on a CD. The tracks and their duration are stated on the CD sleeve.

Technical description OVERSAMPLING

The audio data on CDs and DVDs is stored at a sampling rate of 44.1 or 48 kHz - i. e. for each second of music 44.100 or 48.000 sampled values are available for each channel. In the **DVD 1235 R** the audio data read from the DVD or CD is "multiplied" to a higher sampling rate (384 kHz) before it is converted back into analogue music signals. This process delivers a significantly better, more finely graduated signal to the converter, which can then be converted with correspondingly higher precision.

The **DVD 1235 R** provides two different algorithms for upsampling CD audio signals: the standard FIR filter and the short FIR filter. During playback you can switch between them at any time using the **OVS** -button.

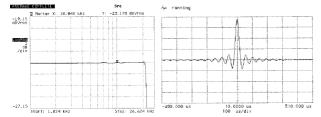
The short FIR filter produces a more accurate signal packet, and therefore sounds slightly more dynamic.

The standard FIR filter suppresses background noise more effectively, and is primarily recommended for vocal and chamber music.

The **DVD 1235 R** therefore provides a means of matching the system's reproduction characteristics to the requirements of the recording and your own personal preferences.

Standard OVS FIR filter

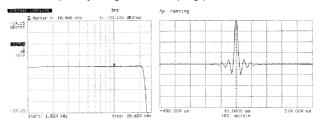
The long FIR filter is the standard oversampling process in digital technology, offering extremely linear frequency response, very high damping, linear phase characteristics and constant group delays. The disadvantage is the pre- and post-echoes which are added to the signal. These "time range errors" tend to affect the music signal's dynamics, precision and naturalness, and reduce spatial orientation.



Frequency response and transient characteristics of the long FIR filter

OVS 1 (short FIR filter)

Shortening the filter (lower coefficient) reduces the time range errors, albeit combined with a slight loss of linearity in the frequency range and damping per-formance.



Frequency response and transient characteristics of the short FIR filter

SACD Operation

CD/DVD and SACD discs have a totally different data structure.

For a CD or DVD recording the analogue signal is sampled at a high rate (44.100 or 48.000 samples / second). The audio signals have to be bandwidth limited before the sampling process to get rid of signal components above 20 kHz because these could not be correctly digitized.

The 20 kHz bandwidth limiting is not necessary for SACD recordings. It is thus possible to record and store audio frequencies up to 100 kHz on SACDs. However, all SACD recordings use a process call "noise shaping" to achieve a dynamic range comparable to CD/DVD systems. This noise shaping leads to a substantial amount of high frequency noise in the range 40 ...100 kHz.

There is a practical problem with the noise shaping; the high frequency noise associated with SACD recordings can not be handled by all amplifier and speaker systems. In some of these the high frequency signals contained on SACDs lead to distortion and thus degrade the sound quality. In such cases it is necessary to limit the bandwidth of the system to about 40 kHz. This would mean to sacrifice the main advantage of the SACD system.

To get the best possible performance out of your HiFi system, the **DVD 1235 R** offers analog and digital signal processing means to tailor the analog output signal exactly to the requirements of your amplifier and speakers.

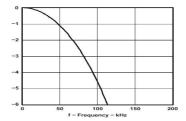
These processing means consist of 4 different digital filters with different bandwidths and different stop band attenuations. (OVS standard, 1, 2, 4). Additionally you can select the 'WIDE' bandwidth mode for the analog output, if your system is capable of handling frequencies up to 400 kHz.

With the OVS and WIDE buttons on the front panel you can experiment and find the combination of oversampling and analog processing that delivers the best sonic results with your equipment.

T+A Amplifiers are very linear devices having a very wide bandwidth. So you can use all possible OVS/WIDE combinations without limitation. We recommend a wide bandwidth configuration using OVS 1 or 3 with our amps.

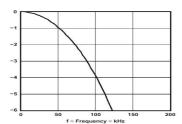
Standard OVS

This filter introduces a slight limitation of the high frequency bandwidth. It is suited for most amplifier / speaker systems.



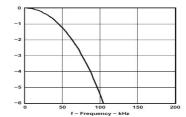
OVS₁

This filter features a wider frequency range. Good amplifiers with at least 100 kHz bandwidth are required.



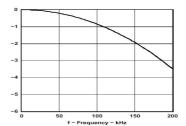
OVS₂

This filter has the narrowest bandwitdth and is recommended for amplifiers with a frequency response <50 kHz.



OVS₃

This filter introduces no bandwidth limitation of the audio signals. A very good amplifier / speaker combination which can handle signals above 250 kHz without problems is required.



Trouble-shooting

Many problems have a simple cause and a correspondingly simple solution. The following section describes a few difficulties you may encounter, and the measures you need to take to cure them.

If you find it impossible to solve a problem with the help of these notes, please disconnect the unit from the mains and ask your authorised **T.A.** specialist dealer for advice.

| Problem: | Machine does not switch on (green LED stays dark). |
|----------|--|
| Cause: | Mains lead not connected correctly. |
| Remedy: | Check connection, push in firmly. |

| Problem: | Machine does not respond when buttons are pressed. |
|----------|---|
| Cause: | Static discharge or powerful interference (e. g. lightning) have affected the processor's memory. |
| Remedy: | Reset machine: disconnect the mains plug, wait about 10 seconds, then plug in again. Switch the machine on. |

| Problem: | Machine responds correctly when front |
|----------|---|
| | panel buttons are pressed, but cannot be remote-controlled via an 'R' series pre-amplifier, integrated amplifier or receiver. |
| Cause 1: | Batteries in remote control handset exhausted or fitted incorrectly. |
| Remedy: | Fit new batteries, or re-fit batteries with correct polarity. |
| Cause 2: | RLINK or RC plug not connected correctly to machine's RLINK or RC socket. |
| Remedy: | Complete connections as shown in wiring diagram; push connector in firmly. |
| Cause 3: | No visual contact between remote control transmitter and remote control receiver of the 'R' series pre-amplifier, integrated amplifier or receiver. |
| Remedy: | Ensure direct visual contact between remote control transmitter and receiver (glass doors may prevent contact). The maximum range of the remote control system is about 8 metres. |
| | Position the remote control receiver so that it is not subjected to direct sunlight or excessively bright lighting. Fluorescent lamps and energy-saving bulbs are powerful sources of interference. |

| Cause 4: | The DVD player is not selected as current listening source on the pre-amplifier, integrated amplifier or receiver, i. e. the control commands from the handset are being passed to another 'R' system device. |
|----------|---|
| Remedy: | Press the CD (or AUX - see next point) on the remote control handset, and try again. |
| Cause:5: | The remote control address of the DVD player (AUX or CD) does not correspond to the selected audio input sockets on the pre-amplifier, integrated amplifier or receiver. |
| Remedy: | The 'RLINK 2 nd ADDR.' switch on the back panel can be used to configure the DVD player either as AUX or CD. You must then select the appropriate input sockets (see 'Back panel connections'). |

| Problem: | Loud hum from the loudspeakers. |
|----------|--|
| Cause: | Cinch plugs making poor contact, or faulty Cinch lead. |
| Remedy: | Check all connections and connecting leads carefully. |

| Problem: | No sound, or distorted sound. |
|----------|---|
| Cause: | Audio connection to amplifier or TV set not correct. |
| Remedy: | Complete the connections as shown in the wiring diagram; push connectors in firmly. Select a different listening source to check the amplifier. |

| Problem: | No sound signal via the digital output. |
|----------|--|
| Cause 1: | Digital plug not connected correctly to the digital output socket on the machine. |
| Remedy: | Complete connections as per wiring diagram; push connectors in firmly. |
| Cause 2: | Digital output switched off. |
| Remedy: | Switch the digital output on using the SETUP menu. |
| Cause 3: | The data format of the selected audio channel (e. g. Dolby Digital or DTS) is not recognised by the decoder connected to the system. |
| Remedy: | Use a decoder which supports the data formats. |

| Problem: | Surround decoder / receiver fails to recognise digital surround programs (Dolby Digital or dts). |
|----------|---|
| Cause: | The digital output of the DVD 1235 R is wrongly configured (PCM instead of ALL). |
| Remedy: | Set the digital output to the correct ALL setting (see 'Basic device settings'). |

| Problem: | No sound from the digital output with SACDs |
|----------|---|
| Cause: | For legal (copy protection) reasons SACD signals are not passed on to the digital output. |
| Remedy: | Please use the analogue output for SACD |

| Problem: | Nothing displayed on the screen. |
|----------|--|
| Cause: | Screen switched off. |
| Remedy: | Press DISP button to switch it on again. |

| Problem: | The disc will not play once the disc drawer is closed. |
|----------|---|
| Cause 1: | Disc not inserted correctly. |
| Remedy: | Position the disc centrally: printed face up. |
| Cause 2: | Disc soiled. |
| Remedy: | Carefully clean the disc by wiping with a soft cloth from the centre to the edge. Replace the disc and try again. |
| Cause 3: | Disc damaged in the area of the Table of Contents (TOC). Disc unusable. |
| Remedy: | No remedy possible. |
| Cause 4: | Machine has got very cold (e.g. after transport), allowing condensation to form on the laser sensor optics. |
| Remedy: | Leave the machine to warm up for about an hour in a warm, well ventilated place. |

| Problem: | Disc stops playing, or 'skips'. |
|----------|--|
| Cause: | Disc dirty or damaged. |
| Remedy: | Clean disc. Damage cannot be repaired! |

| Problem: | Black and white picture, distortion or scrolling when playing a DVD or VCD. |
|-----------|--|
| Cause: | The television is not set to the same picture name (PAL / NTSC) as the disc, or cannot process its picture norm. |
| Remedy 1: | chose PAL/NTSC according to your TV set in the menu 'Preferences' |
| Remedy 2: | Use a multi-norm TV set. These sets automatically switch to the current picture norm, or can be switched over manually |

| Problem: | After removing the disc the machine fails to return to the Start screen. |
|----------|--|
| Cause: | The program may be waiting for a further disc. |
| Remedy: | Insert the next disc. |

| Problem: | The picture is displayed too small or incompletely (abbreviated). |
|----------|--|
| Cause 1: | The DVD in the drawer is not set to the same picture format (4:3 or 16:9) as the TV set connected to the system. |
| Remedy: | Set the correct picture format in the SETUP menu. |
| Cause 2: | Many DVDs contain film recordings in different picture formats on the front and rear faces. |
| Remedy: | Turn the DVD over, or set the correct picture format in the SETUP menu. |
| Cause 3: | The television is set to the wrong picture format. |
| Remedy: | Set the TV to the correct picture format, i. e. the one corresponding to the DVD. |

| Problem: | The DVD 1235 R fails to carry out certain functions. |
|----------|---|
| Cause 1: | Function blocked for this DVD. |
| Cause 2: | Function (e. g. camera angle, sub-titles etc.) not present on this DVD. |
| Remedy: | No remedy possible. |

| Problem: | After inserting a DVD the screen displays a warning of the wrong regional code. |
|----------|---|
| Cause: | The DVD is not approved for your region. |
| Remedy: | Contact your DVD supplier and exchange the disc for a version approved for your region. |

| Problem: | In rare cases the DVD's Disc Menu cannot be operated when the 'Pan-Scan' picture format is set. |
|----------|---|
| Remedy: | Set picture format to "Letterbox"; call up the Disc Menu again. |

| Problem: | If the DVD 1235 R is connected to a TV set directly using a SCART lead, this can result in a scrolling DVD picture appearing on all programme memories. This problem may occur with many types of TV. |
|-----------|---|
| Cause: | The TV set is analysing the A/V switching signal from the DVD player incorrectly, or not at all. |
| Remedy 1: | If possible, call up the Setup menu for your TV set and switch off RGB priority. Select the RGB signal type for the DVD SCART input of your TV set. |
| Remedy 2: | If your television does not provide this option, connect the DVD player using an S-VHS lead, or use a SCART lead without RGB signal. Ask your T+A dealer for help with this. |
| Remedy 3: | When watching TV, switch off the DVD player by pressing the ON button on the front panel. |

| Problem: | When used in a non-T+A system the machine does not respond to remote control commands, or cannot be switched on by remote control. |
|----------|--|
| Cause: | E 2000 remote control receiver not connected. |
| Remedy: | Connect the E 2000 remote control receiver as shown in Wiring Diagram 3 . Press the source select button (or Aux) on the remote control handset to switch the machine on. |

| Problem: | When operating the menu for the surround decoder or surround receiver, the DVD 1235 R also responds. |
|----------|--|
| Cause: | E 2000 connected to the DVD 1235 R. |
| Remedy: | Connect the E 2000 to the pre-amplifier, integrated amplifier or receiver. |

| Problem: | MP3 CD does not play back. |
|----------|--|
| Cause: | MP3 format not supported (see ' <i>Playing MP3 CDs</i> '). |
| Remedy: | (see 'Playing MP3 CDs') |

| Problem: | Distorted or double picture at the YUV output (only P-Scan option) |
|----------|--|
| Cause: | P-Scan switched on buit TV set not compatible with progressive video signals |
| Remedy: | Switch P-Scan off (PSCAN) button on the front panel). |

| Problem: | No picture. |
|----------|---|
| Cause: | Video-output switched off |
| Remedy: | switch ON the video output (button on the front panel) |

| Problem: | 'OVERHEAT' displayed, playback stopped |
|----------|--|
| Cause: | Device is over heated, too little flow of cooling air |
| Remedy: | change the installation of your system to provide sufficient cooling. |
| | do not place the DVD 1235 R on top of hot equipment like amplifiers or surround receivers |

| Problem: | Discs can not be played. A message to enter a PIN appears. |
|----------|--|
| Cause: | This disc is locked |
| Remedy: | Enter a valid PIN number or unlock the disc (see menu 'Setup / Access'). |
| Note: | In case you have forgotten your PIN number, enter the menu 'Setup / Access / Enter PIN'. Enter the input box on the right and press the Top -button four times (the on screen display will show the "forbidden" icon). Then enter 0000 twice. The PIN is now reset to to 0000. |

Specification

Mechanism: high precision linear tracking drive

> GaAlAs semiconductor laser: 785 nm / 10 mW (VCD / CD) (DVD / SACD)

650 nm / 7 mW

Formats

Video DVD, DVD+R / +RW, DVD-R / -RW, VCD, SVCD

Audio CD. CD-R / RW. MP3-CD.

SACD Stereo, SACD Multi channel as 2-channel down-mix

Picture Picture CD (JPEG)

Audio section

Analogue audio outputs 2 x Stereo, 2 x Stereo TV

Digital audio outputs 1 x coaxial, 1 optical, IEC 60958 (CDDA / LPCM),

IEC 61937 (MPEG1/2, Dolby Digital, dts)

D / A converter for CD, DVD, (S)VCD, MP3 24 Bit / 384 kHz Sigma / Delta

D / A converter for SACD

front channels DSD differential converter

CD 2 Hz -20 kHz Frequency response:

> SACD 2 Hz -60 kHz DVD-V 2 Hz -22 kHz DVD 96/24 2 Hz -44 kHz

Total harmonic distortion / Intermodulation: < 0.002 %

Effective system dynamics: CD 96 dB

SACD 105 dB DVD-V 100 dB DVD 96/24 105 dB

Signal / noise ratio: 109 dB Channel separation: 100 dB

Video section

TV-Standard:

625 (PAL, 50 Hz) / 525 (NTSC, 60 Hz) lines:

Progressive Scan (Option) 576 P, 480 P (Component)

Video-Format: MPEG 1 für VCD / MPEG 2 für DVD

DVD.

resolution horizontal / vertical: 720 Pixel / 576 lines (50 Hz) / 480 lines (60 Hz)

VCD.

352 Pixel / 288 lines (50 Hz) / 240 lines (60 Hz) resolution horizontal / vertical:

Video DA Converter 12-bit / 108 MHz

Bandwidth 12.5 MHz (Luma), 6 MHz (Chroma)

Video-Output: 1.0 V_{SS} / 75 Ω S-Video Output: (Y) 1.0 V_{SS} / 75 Ω

> (C) 300 mV_{SS} (Burst) / 75 Ω

RGB (SCART-Output): 0.7 V_{SS} / 75 Ω **Analogue-Audio-Output:** 1.9 V_{eff} / 450 Ω

General

Power supply: 230 V / 50 Hz, 40 VA oder / or 117 V / 60 Hz, 40 VA

(see print on back panel)

standard accessories: power cable, RLINK-cable, Video-cable, Stereo cable

User manual

We reserve the right to introduce technically founded modifications.

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