CDRWin 10

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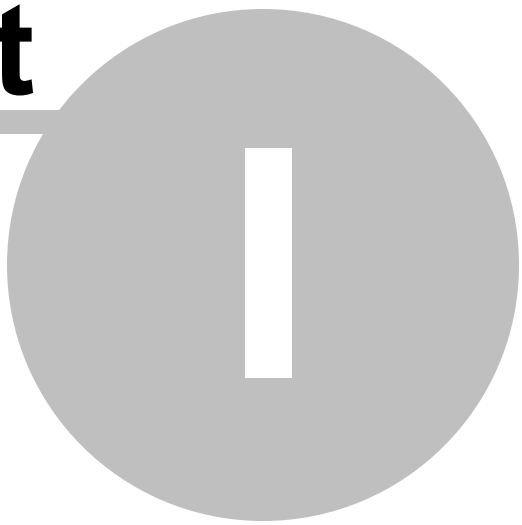
Part



1 CDRWin 10

1.1 Welcome

Professional CD, DVD and Blu-ray-Recording

CDRWin 10

Burn. Copy. Devil Proofed.

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1.2 About CDRWin 10

CDRWin burns again. As good, simple, reliable and professional as ever. Just wicked!

CDRWin 10 is the latest version of the classic CD-burning program, equipped with state-of-the-art technology and based on features from the program's previous versions that have been so successful: reliability, speed, extensive functionality and a certain down-to-earth approach that takes the shortest route to achieve its objective.

CDRWin 10 offers massive, reliable burning power for your CD,DVD and/or Blu-ray writer, with a wicked, new, state-of-the-art interface where the key functions cleverly operate under the surface. And why ever not? This fiendishly good program leaves it to others to show off complicated setting options, while it happily gets on with the job of burning discs, which it is second to none at.

You want to burn audio, video and data CDs/DVDs? Not a problem. You want to copy CDs/DVDs? This is not a problem either. Even less so in complicated cases involving scratched audio CDs and copy-protected games CDs/DVDs. Why advertise the fact then that defective sectors do not pose any problem? Experienced users know, anyway, that CDRWin's copy functions are state-of-the-art and so sophisticated that we need to keep this helluva program on a tight rein … If it's legal, we'll copy it!

Key Features:

- Copying data CDs/DVDs (including computer games) and video CDs and DVD videos*
- Burning ISO, BIN and XMD images, as well as CUE files
- Authoring Orange-Book compatible data CDs (CD-ROM, CD-ROM/XA), as well as data DVDs and Blu-ray discs. Creating MP3 and MPEG-4 CDs/DVDs
- Cross-platform ISO 9660 file system and the Windows Joliet system set automatically to display longer file names and complex directory structures
- Authoring of Red-Book compatible audio CDs (CD-DA) in Disc-at-Once mode and manually adjustable track pauses
- Support for Disc-at-Once (important, for example, for standardized production of audio CDs and for copying CDs/DVDs), Track-at-Once (important if data CDs are going to be extended later on) and Session-at-Once (additional material on the CD) modes
- Ripping audio CDs
- Editing ripped or already available audio files
- Converting audio formats
- Additional tool for rapidly deleting rewritable media .
- Caching system for optimizing the system configuration and guaranteeing a reliable burn process .
- Support for all known blank disc sizes from 21 to 99-minute playing time, DVD+R, DVD-R, DVD+RW, DVD-RW, DVD DL, DVD- RAM, BD-R. It is also possible to overburn CD-Rs .
- Support for different technologies for preventing write failures, e.g. BurnProof .

*CDRWin 10 is unable to copy audio CDs, DVD videos supplied with effective copy protection, and individual DRM-protected audio files .

1.3 Support

If any unexpected problems crop up when you are using CDRWin, you can contact our support center with confidence .

Important: To help us provide you with effective support, please have the following information to hand :

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- **information about the program you bought:** the program name, in this case CDRWin, and version number (which can be found under About).
- the **operating system** that you are using.
- a brief description of the problem and how often it occurs (occasionally or regularly). If you have a screenshot of the error message available, attach it to your query if you are sending it by email .

Web:

You can reach our Support-Center via the contact form under http://www.cdrwin.de/index.html?language=en

1.4 Package content

The product package that you have bought comprises the CDRWin 10 program, including help files. If you purchase the box version, this also includes a DVD booklet with a hard-copy manual. You will find the license and serial number in the manual. If you have purchased the program online you will receive the serial number via email .

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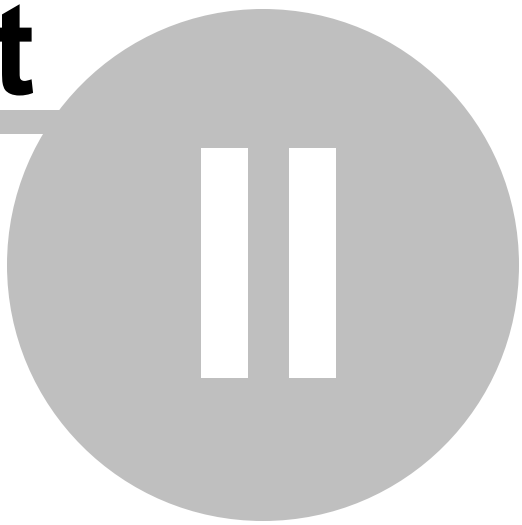
Part



2 Installation

2.1 System requirements

You require the following hardware components (closely linked to the operating system being used) in order to be able to use CDRWin to create and copy CDs/DVDs :

- a computer with a 1 GHz processor
- at least 128 MB RAM (256 MB recommended)
- around 15 MB of hard disk space for installing the program
- several gigabytes of free storage space for recording and caching images (there should be at least 1 GB for CD images and between 5 and 17 GB for DVD images).
- a 16-bit sound card
- CD/DVD-ROM drive/recorder, Blu-ray writer (optional)
- mouse or compatible input device

You need to have a running Windows operating system to install the program. The program is supported by *Windows 2000, Windows XP* (*Home*, *Professional* and *Media Center Edition*) *Windows Vista* and *Windows 7* (32Bit and 64Bit). You are also recommended to install any updates that are currently available for your relevant operating system .

2.2 Installation

The procedure for installing CDRWin on your system is as follows :

1. Save your current data and shut down all open programs. The only exceptions to this should be important background processes, such as virus scanning and/or firewalls, to ensure that your computer is not compromised .
2. Insert the CDRWin CD in your CD/DVD-ROM drive. If the *Auto-Insert Notification (AIN)* feature in Windows is activated, the setup routine launches automatically. You have the following options available if the *AIN* feature is deactivated :
   a. Click *Start* > *Run* and key in *D:\setup* in the command line. If necessary, you might need to use a different drive letter, depending on which letter corresponds to your CD/DVD-ROM drive. Sometimes the setup file can also have a different name, e.g. *cdrwin.exe* .
   b. Launch the setup file directly from the installation CD. (You will find your drive in the My Computer directory on the desktop). Double-click this to start the installation process .
   c. If you are downloading the program, you simply start the process by double-clicking the exe file you have downloaded .
3. The Setup Wizard configures the application for you .

2.3 Setup Wizard

The Setup Wizard is responsible for the installation process that is mostly fully automated and leads you step by step through the process until you have achieved your final setup. As usual, the following procedures are involved :

- Click the *Next* button to go on to the next step in the installation process .

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- Click the *Back* button to return to the previous step in the installation process .
- Click *Cancel* to terminate the installation process. No changes will be made to your system until the program files are finally copied .

Target folder

When you are deciding on what the program's target folder will be, you can use the *Change* button that is available to go through your file system looking for a suitable location. CDRWin 10 is installed by default in the folder *C:\Program Files\CDRWin 10* .

If you click the *Disk Usage* button you will get an overview of the free space available on your drives .

Then click *Next* to determine the following options:

- **Create desktop shortcut :** Allows you to access the Start Center via a shortcut on your desktop
- **Create QuickLaunch shortcut :** Allows you to access the Start Center via a shortcut in the quick start section of the taskbar .

If you click *Install* again, this will install the definitive configuration of CDRWin 10 on your system.

Complete the installation by finally clicking *Finish* .

2.4 Starting the program

Once you have installed the program, if you select *Start* > *All Programs* you will see the new folder *CDRWin 10*. Click the file *CDRWin 10* to launch the program .

2.5 Registration

When you start an application for the first time you will be asked to enter the serial number. You will find this number (depending on the version you bought) in the manual, on the packaging/CD cover or in an email that has been sent. Click *Enter serial no.* and enter the code in the five fields provided for this. Otherwise, the number can also be inserted from the clipboard. Click *OK* to activate the application .

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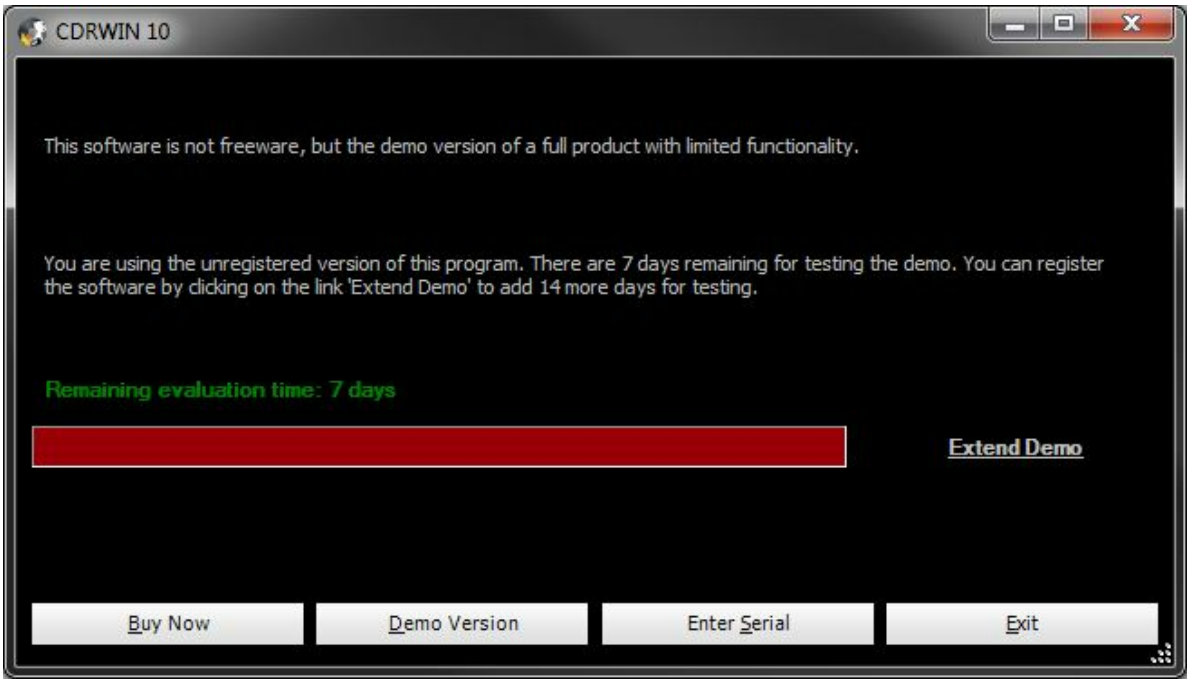

2.6 Demo version

You can use the full version of CDRWin 10 for 14 days as a demo. You can test the software extensively in every area during this period, but you need a valid license to use the program after this. It would give us great pleasure if our application could convince you during this period to become a new customer .

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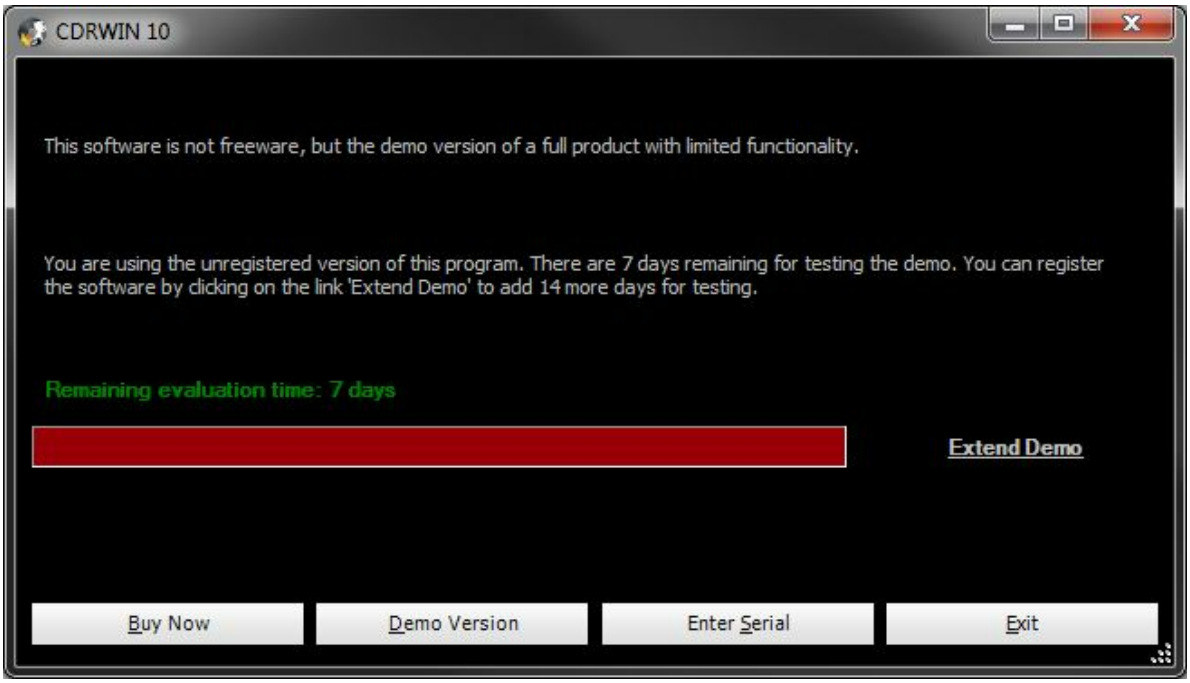

2.7 Update

You can update your software by clicking the update icon in the top right of the screen. To do this, the program's internal Update Wizard connects to our update server to search for new versions of CDRWin 10. If the search is a success, you will be asked whether you want to download the update. (All registered users of our products generally receive free updates according to the relevant version number of their programs .)

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Note: The Wizard only transfers the data required to update the program and obviously not any personal information .

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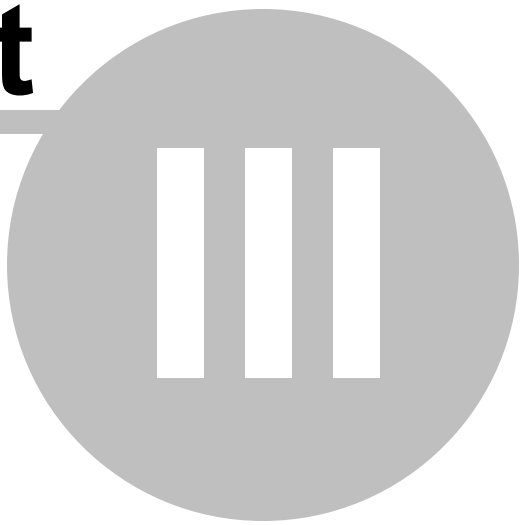
Part



3 First steps

3.1 Using the program

CDRWin 10 can only be used, to a large extent, with the mouse. You navigate through the program in the same way as you select individual options by left-clicking them, while the right mouse button is reserved, as is usually the case in Windows, for a particular popup menu. You can add the files to be converted or written either via an integrated Explorer window or by drag & drop. The options can generally be selected via dropdown lists .

3.2 Program setup and user interface

The CDRWin burn application comprises six functional areas that can be accessed via the main screen :

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- **Copy disc:** Copies CD-ROMs, DVD-ROMs, DVD videos, audio CDs, as well as copy-protected games and software CDs/DVDs. You can also use it to burn ISO, BIN and XMD images and produce professional copying instructions using cuesheets (CUE).
- **Data:** Creates Orange Book-compatible data CDs (CD-ROM, CD-ROM/XA), for instance, for backing up your data or for your MP3 collection .
- **Audio:**
  a. **Rip Audio CD:** Rips music CDs .
  b. **Create Audio CD:** Creates Red Book-compatible audio CDs .
- **Settings:** Sets various general program options .
- **Tools:**
  a. **Erase disc:** Recycles rewritable media .
  b. **Finalize disc:** Finally "completes" a disc. After this, no further information can be recorded on this disc .
  c. **Disc Info:** Information about the disc inserted .
- **Video:** Burns a ‚Video_TS'-folder as a Video-DVD, i.e. a complete folder structure of a DVD-Movie.

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3.3 Toolbar

To quit a module and return to the main screen, click the small arrow in the top left of the screen .

Other icons :

- **About:** Information about the program .
- **Update:** Starts the Update Wizard (see above) .
- **Help:** Starts the online help

3.4 File browser

The integrated file browser helps you choose the files and directories that you want to write and is usually launched via a folder icon and/or a popup menu .

Your file browser has a similar structure to that of Windows Explorer :

- You can open drives and directories in the left column by double-clicking the small + symbol or by clicking the actual folder. You can then click an item to select it .
- The files belonging to a particular directory are listed in the right section of the window .
- If you right-click a selected item the standard Windows popup menu appears with file or directory commands specific to the system .

Unlike in Windows Explorer another area appears below the two list windows, which is used for recording the items you want to burn.

To select a file, you can double-click the relevant item or “drag” it (including whole directories) with the mouse from the top to the bottom list. If you want to delete any items from the *list of selected files* that you do not want or have selected by mistake, simply select and press the *Delete* key .

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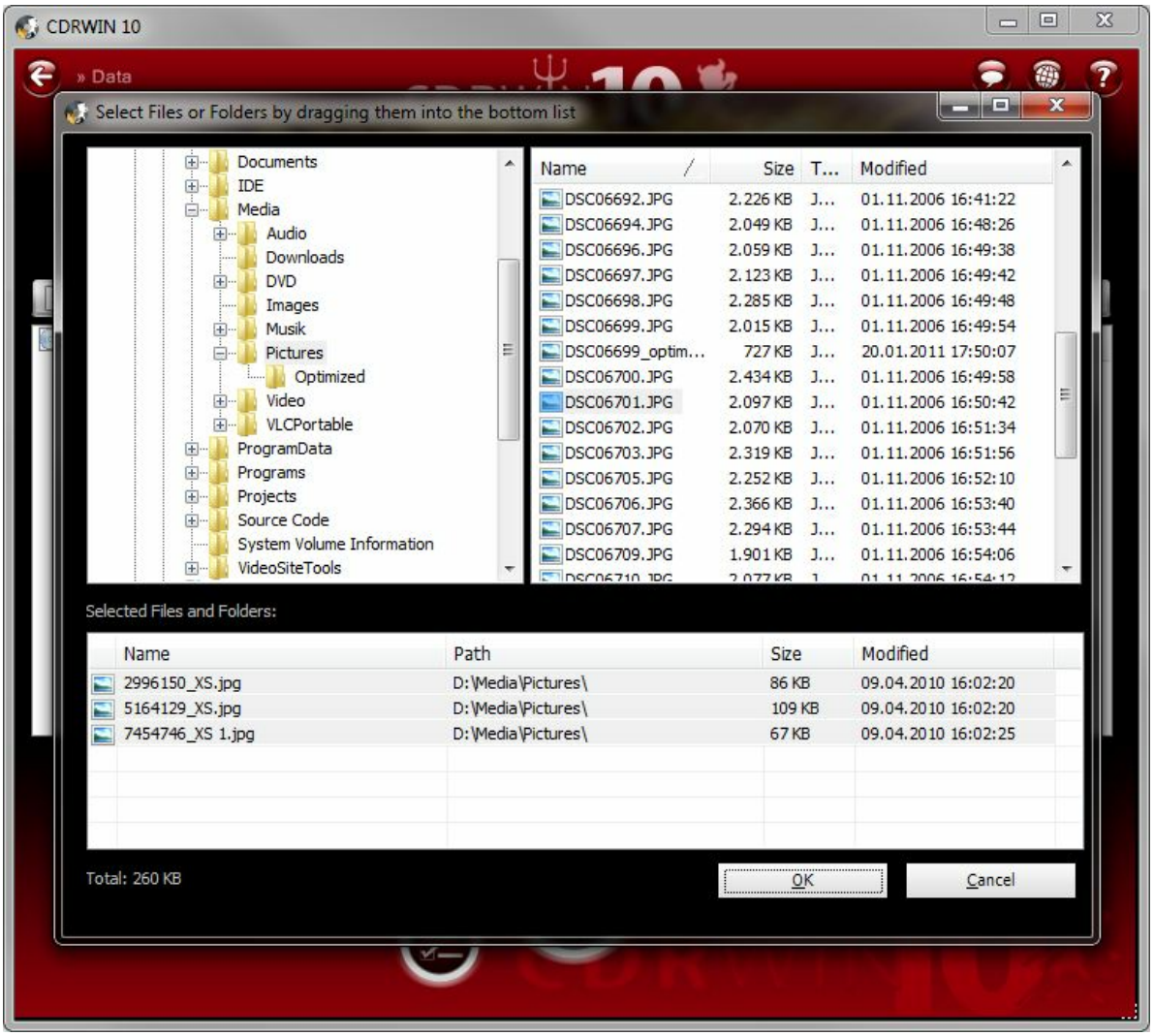

If you click *OK* the content from the list of selected files is taken and transferred to the relevant program module that is open. The new files are added to any items that are already there .

3.5 Progress window and log file

When individual actions are being carried out (e.g. burning a disc), the program provides a graphical progress indicator that keeps you informed of the action's progress and shows you how much time has already elapsed and how much is still left to go. It also provides you with information in a log window area about the individual steps involved.

You can save this information as a simple text file by clicking the *Save log* button. It can then, for instance, provide important assistance to the support team when they are trying to pinpoint the cause of an error.

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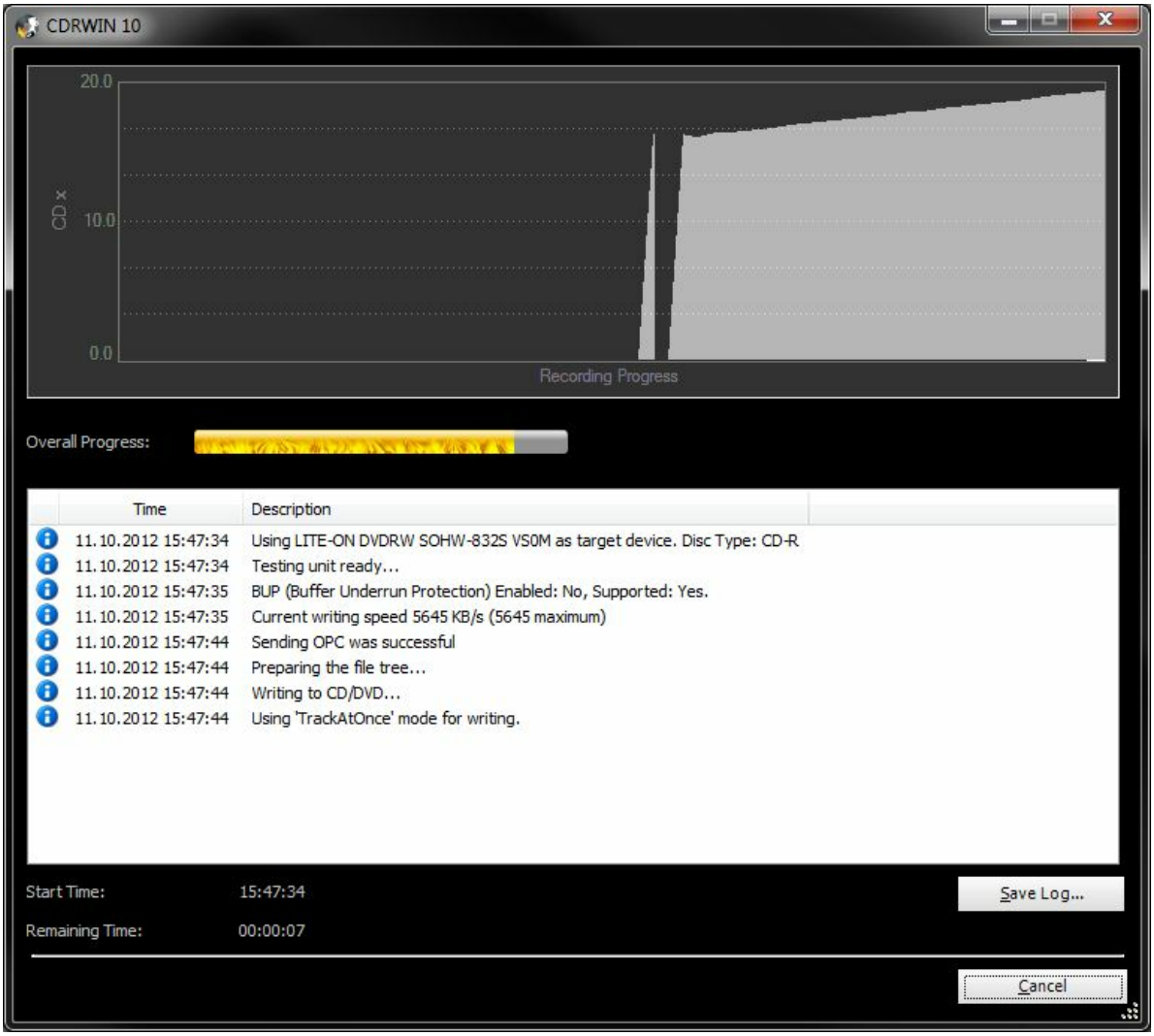

3.6 Settings

3.6.1 Notes

The Settings define various initial parameters for CDRWin to save you time needlessly inputting data.

To make it easier to understand, the dialog box has been split into four sections: Common (e.g. default options), Devices (e.g. for the burn process), Data (important, particularly when creating CD/ DVD-ROMs) and Audio (default settings, e.g. file-naming conventions for the rip module) .

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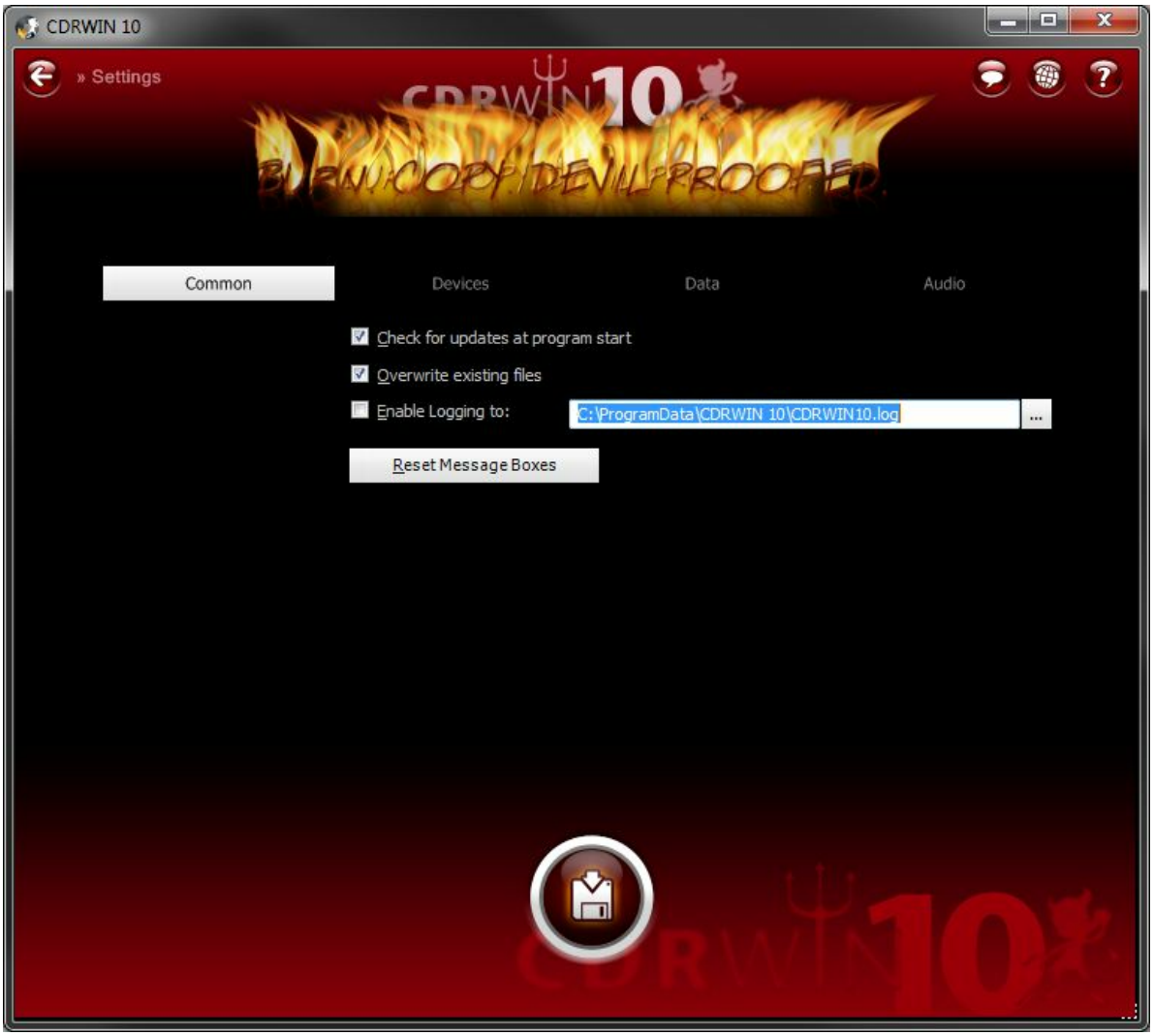

3.6.2 Common settings

"Common" settings relate exclusively to options for the CDRWin program itself :

- **Check for updates at program start :** Activates the Update Wizard, which contacts one of our servers when the application is launched to search for a new version of the program. If the search is a success, after responding to a prompt, the download and installation process starts automatically. **Note:** Using the Update Wizard obviously does not entail any theft of your personal data .
- **Overwrite existing files :** This setting ensures that older files with the same name are overwritten by new versions .
- **Enable logging to :** Activates the logging function (see above), which records the program's individual actions in a log file during a burn or other operation. This file can be analyzed later on, for instance, for troubleshooting. The input field beside it allows you to specify the location and name for the log file. An Explorer Wizard helps you look for a location to save it .

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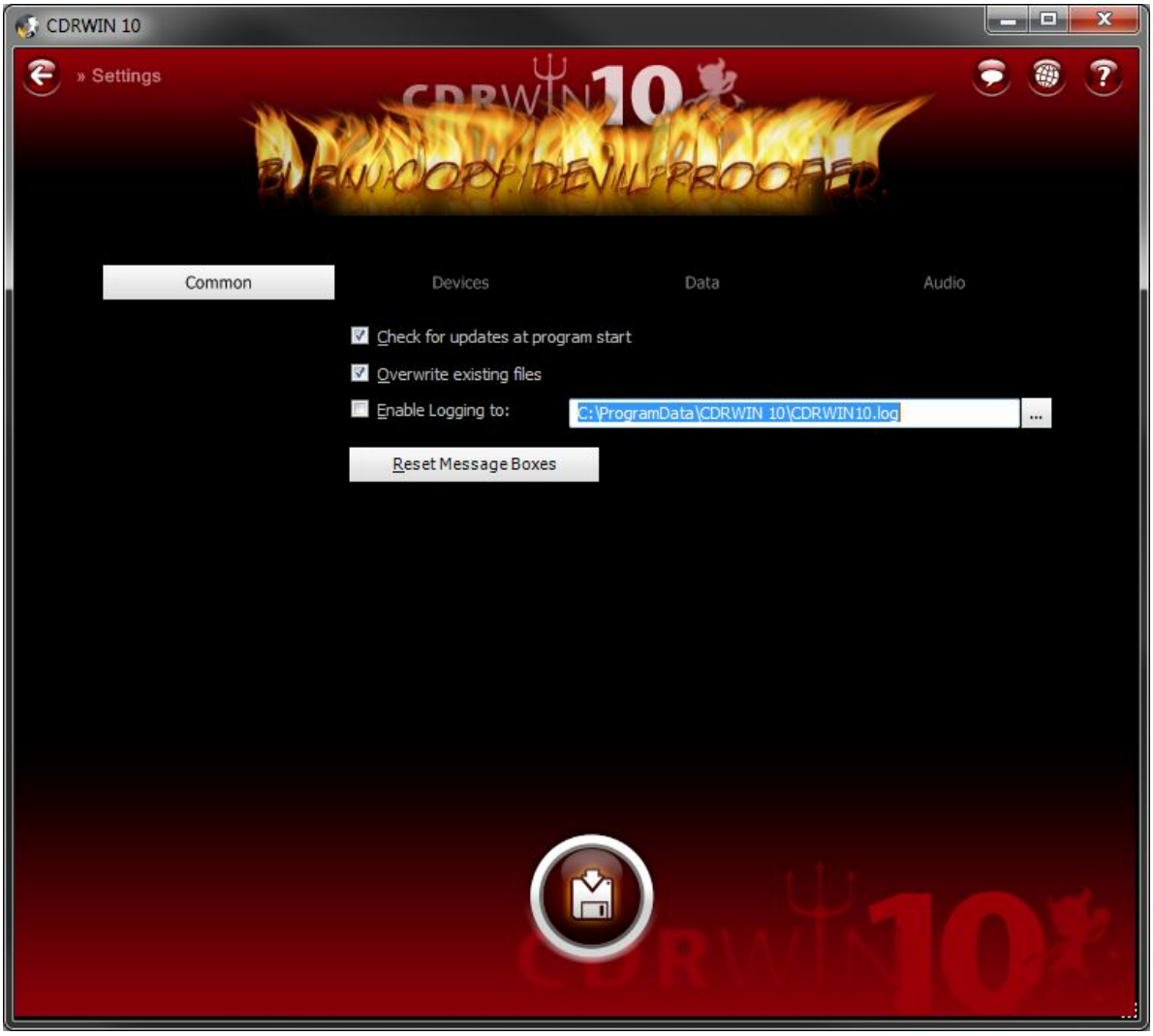

3.6.3 Devices

If you have more than one writer, specify via the Device dropdown list which one should be accessed by default. The other options apply to the relevant burner selected :

- **Automatically eject the disc after burning :** Opens the drive tray after the write process so that the burnt disc can be removed .
- **Use simulation mode for CD/ DVD recording :** If you are not sure whether a burn operation has been successfully completed, check the box for simulation mode. This setting replaces the actual burn operation with a test run, which carries out the exact same write operation, but without burning any data .
- **User Buffer underrun protection (BurnProof, JustLink etc.) :** Activates the internal buffer of a burner, which uses this buffer to protect against burn failures. This option should be permanently checked as carrying out everyday operations on the PC during the write process could cause the operation to fail due to interruptions in the data flow .
- **Burn Speed:** Sets the write speed that your device should normally operate at .
- **Supported Features :** The features listed here are those supported by the device you have chosen. If you feel obliged to complain, for instance, that copies of computer games are not running properly, it may be

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due to the fact that your device cannot perform certain write and/or read operations (e.g. subdata analysis) .

3.6.4 Data

The Default Path for Image is the directory where all future image files will be saved. Make sure that there is sufficient free space available at this location as images can grow very large (depending on the size of the original disc or the number of files to be saved in one image).

The other options :

- **File system:** The default file system going to be used for a disc is primarily based on the area of application envisaged. For example, if the most widely used file system is ISO 9660, supported by platforms like Linux and Mac OS, this does not support, unfortunately, long file names and only a small number of directory levels. On the other hand, theJoliet system developed by Microsoft supports long file names, special characters and deeper directory nestings, but is only recognized by Windows operating systems. At least, Joliet can be used to create an ISO 9660 copy that makes relevant discs accessible to

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other systems, even without the extensions. Finally, UDF is the latest development in file systems for optical storage media. However, these come in a large variety of version numbers, whereby only the earlier versions can be recognized by older devices .

- **Data Mode :** There are various standards available for creating data CDs, with CD-ROM being the most compatible with older CD drives .
- **ISO Level:** The ISO 9660 file system can operate at different levels, where each level adds different extensions. The same basic principle also applies here to ISO 9660, compared with the Joliet system, in that the simplest version is also the most compatible .

Note: If a drive is having problems reading discs created by CDRWin, you should carry out a check by creating a test disc with a simple ISO 9660 file system in CD-ROM mode .

3.6.5 Audio

The Default Path for Music is the location where CDRWin should put music files ripped from CD. Make sure that there is sufficient storage space, which can be reduced at a variably high rate, depending on

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the format you want to convert to. For instance, Windows Wave (.wav) format requires around 10 MB of space per minute of music. An Explorer Wizard helps you look for a location to save your files.

File Naming Convention relates to the way in which ripped and converted music files should be saved, e.g. in the form <artist> - <album> - <track> - <title>. In this case, the file name could be something like: "Blue Collar – Dust – 01 – Deep Hit" .

The other options :

- **Retrieve additional information from the Internet :** Activates the freedb function that retrieves information about a track from the Internet .
- **Convert CD-Text info in upper case to normal case :** This function enables the program to convert information transferred from a CD text to lower case .
- **Rip CD automatically :** Launches the rip module as soon as an audio CD is inserted .
- **Eject CD after ripping :** Opens the drive tray after ripping a CD .
- **Burn CD-Text :** Activates the fuinction to burn title informations to audio CD's. (Please read your recorders documentation if it's supported by it)
- **Burn CD with gap of xx seconds :** Inserts a pause lasting the number of seconds specified here, when creating an audio CD (does not apply to MP3 CDs/DVDs).

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Part

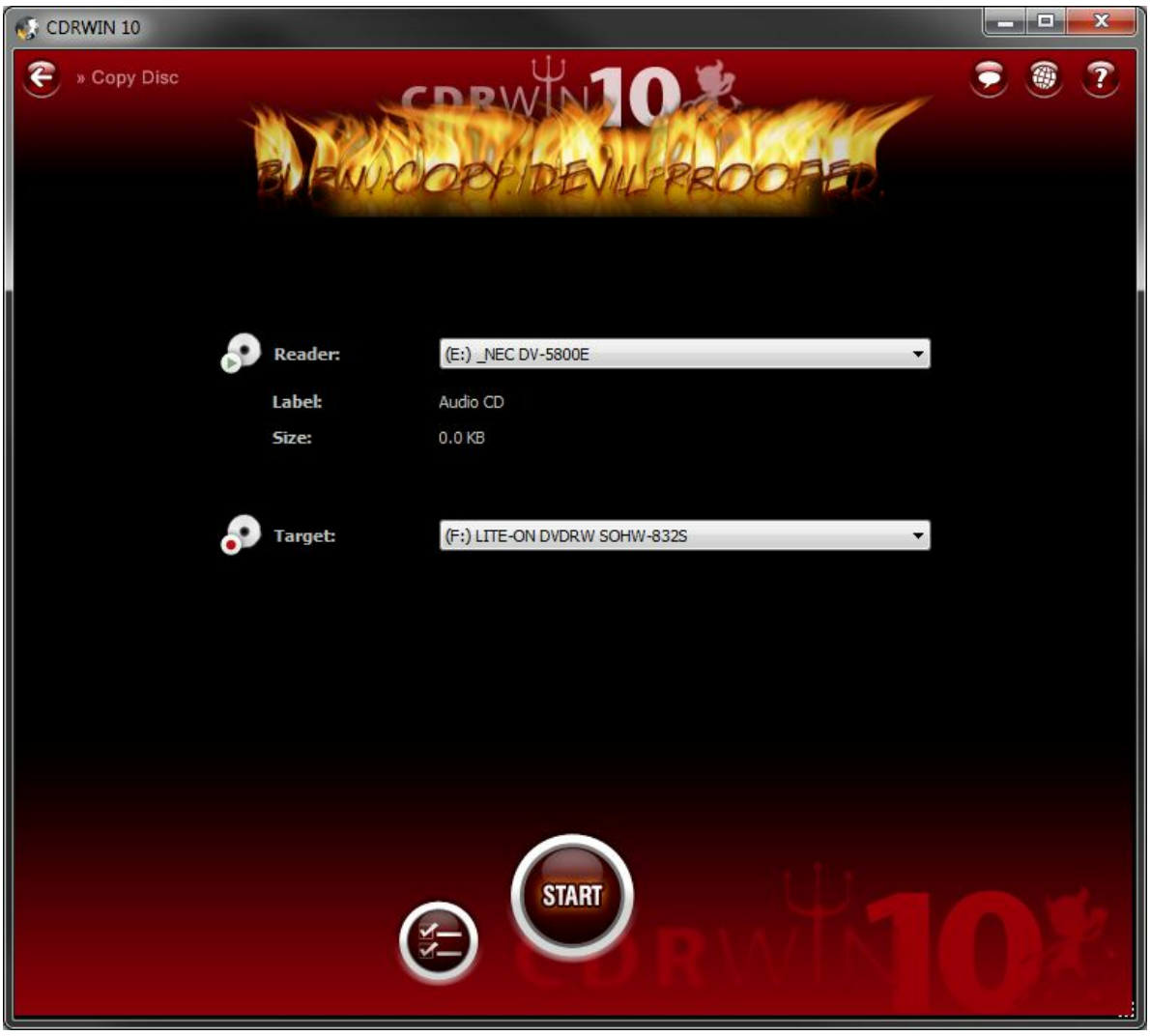
4 Copying discs

4.1 Copying discs

To copy a CD or DVD, first specify the source under Reader. This can be a CD or DVD inserted into a physical or virtual drive, as well as an image file on the hard drive.

You then specify the target, which, as with the source, can be an appropriate blank disc (CD-R or DVD-R) in a physical drive or else an image file. In the latter case, select "Use hard disk folder entry" from the Target dropdown list.

Click the CDRWin icon to launch the process .



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4.2 Image file

Under Image you specify the location and the name of the image file, which serves as a temporary or final medium, depending on the process. If you want to create a copy on another optical storage medium, the image file is deleted once the operation is complete. If originally only one file is required, the file is kept under the same name. In other words, when copying from drive to drive, the data from the source medium is first of all transferred to an image and then to the recorder. However, when copying to an image, it is only transferred to the relevant file on the hard disk.

If you have more than one optical drive, you can obviously also create your copy directly from drive to drive. When doing so, you should bear in mind the following points :

- In some cases, it is not a good idea to make a direct copy, for example, if the analysis/duplication of copy protection for data CDs/DVDs takes up a huge amount of time. This creates the risk of write failures because a burner should receive as steady a flow of data as possible within specified timeframes .
- Unprotected or only simply protected discs can very often be copied even directly. However, it is an absolute must that the read drive is noticeably superior to the writer in terms of its speed. As a general rule, this drive should read twice as quickly as the burner writes. This means that if you want to use a 20x speed writer you must have a 40x speed CD/DVD-ROM drive .
- In case of any doubt, you are always recommended to adopt the slightly more time-consuming approach, which involves creating an image. At any rate, even if a direct copy operation seems to have been successful, the CD/DVD may have been written incorrectly and provide a constant source of unnecessary hassle. Alternatively, you should then at least repeat the operation with a lower write speed .
- When you want to right at high speeds and the discs are defective, scratched or copy-protected in a complex manner, you should always copy via an image file as the read process generally lasts in every case longer than the time it could take the writer to transfer the data to CD/DVD in order to guarantee a constant data flow to the recorder, which the latter is dependent on .

Make sure when you are specifying the directory for your image that there is sufficient storage space available as the file will take up the same amount of space as the original disc .

4.3 Writing images

If you want to write to CD or DVD an image file that you have previously created or obtained in some other way, select "Select an image file …" under Reader.

Select the target device and click the CDRWin icon. You do not need to cache an image file as the source is already on the hard drive and you would hardly expect write problems from an empty cache buffer .

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Note: You can also specify a cuesheet file instead of an image .

4.4 Copyable items

You can copy audio CDs that are not copy-protected, as well as unprotected DVD videos and copy-protected games and software media. In the case of the latter items, you are allowed by law to make no more than one copy as a backup, and for private use only. If any medium cannot be duplicated, you will receive an error message .

Copy protection

Many games manufacturers apply different copy protection measures to their products, which vary according to the product from very simple to highly complex. But there is no need for you to know about these in detail as CDRWin automatically applies the right settings behind the scenes. For example, not just subchannel data is recognized but also content entries that have been deliberately

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tampered with, not to mention that read errors are ignored by defective sectors .

You should remember however that you are only allowed to create one backup copy of each copy-protected data CD/DVDs, and only if the supplier cannot offer a replacement for defective discs .

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Part V

5 Writing data discs

5.1 Writing data discs

Data CDs/DVDs/BDs are primarily used for backing up important data, for archiving and exchanging data, but also for creating MP3 CDs/DVDs for compatible players .

Note: Data CDs can be played on CD, DVD and Blu-ray drives, data DVDs on DVD and Blu-ray drives, and data Blu-ray discs only on Blu-ray drives .

In order to create a data CD/DVD/BD, load the files and/or folder you want to burn via the file browser by clicking the relevant icon (Add Files or Add Folder).

Then create your CD/DVD/BD. This involves the files and folders you want to burn appearing in the right list window. You can use the toolbar above to create a new folder, add more files, delete existing items and/or rename them (if you delete or rename files you have created, this will not affect the original files).

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You use the left part of the window to manage the current burn project. You can use the popup menu to create new folders and rename the disc you are going to create (your MP3 CD will be displayed with this name in Explorer). You will also find another small toolbar that you can use to save the project, load an earlier one or start a completely new one .

Note: A project includes the references to all the data to be burned and an indication of how the images to be created will be split into directories and subdirectories. On the other hand, the relevant files themselves are not part of the project file. This means that if, in the meantime (in the period between saving a project file and the burn operation) you delete any files and/or folders, or move or rename them, CDRWin will not find this data as the project file still contains the old information about the storage location and name .

Click the CDRWin icon to launch the process .

Important: The program shows you above the list window the total volume of data to be burnt. Make sure that this figure does not exceed the storage capacity of the blank disc inserted .

Target options

You have as the "Target" of the data saving operation the creation of an image ("Select an image file" option), or you can write data directly to a blank disc .

5.2 MP3 audio and MPEG-4 Video CDs/DVDs/BDs

The rules for creating an MP3 CD/DVD/BD and media with various video files are the same as those for creating a normal data disc .

Important: All the titles are burnt on the CD (or DVD) in the order they appear in the list window. However, it is possible that your player will reproduce the songs not in the order they were burnt but by folder or alphabetically. CDRWin has no influence over this .

Note: Occasionally, hardware players are highly sensitive with regard to the directory structure and the number of files burnt per disc. With this in mind, refer to the documentation for your device, which should have the relevant upper limits indicated in it .

Refer to your DVD player's documentation to find out which format it supports. In general, you can assume that MPEG-4 and DivX/DVD players can reproduce AVI files with HDX4, DivX, and Xvid videos, many of which can also reproduce MP4 (Nero Digital) and WMV (Windows Media).

Note: MP3 CDs and MPEG-4 CDs can be played on CD, DVD and Blu-ray drives. MP3 DVDs and MPEG-4 DVDs are compatible with DVD and Blu-ray drives, while MP3 BDs and MPEG-4 Blu-ray discs can only be played by Blu-ray drives (provided that the format is recognized).

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Part VI

6 Writing and ripping audio discs

6.1 Note

The *Audio* feature provides you with two functions :

- creating Red-Book compatible audio CDs for all audio CD players
- recording an audio CD (ripping)

6.2 Creating audio CDs

Original audio CDs are subject to a strict standard (CD-DA) so that they can be played by any audio CD player in the world, known as Red Book compatibility. The process of creating such disks using CDRWin is very simple and starts off with the launch of the relevant module in the start window .

1) Enter the titles you want to write in the list window. To do this, launch the integrated file browser by clicking the Add Files icon. Double-click a target file to select it or drag it to the bottom selection area (refer to the File browser section in the *Introduction* chapter for this).

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CDRWin supports the widest variety of audio file formats, including WAV (Windows Wave), WMA (Microsoft's Windows Media), not forgetting of course MP3. The application automatically carries out the conversion to the PCM data stream required for audio CDs .

2) With audio CDs, compressed music files with small sizes become uncompressed data streams again, which can increase the space they need by up to ten times. Always keep a watchful eye then on the progress bar below the list window. The capacity limits for conventional blank CDs are 74 minutes (650 MB) or 80 minutes (700 MB).

You can change the order of the titles by selecting an item and clicking on one of the two arrows in the small toolbar. You can use the red cross to delete a title from the list (but it is not physically deleted).

You can use the left toolbar to manage this audio project, in the same way as for data discs, e.g. load an earlier disc (see above) or create a new one. It is also the case with audio CDs that a project only contains references to the titles you want to burn, whereas the original files are not part of the project file. This means that if, in the meantime (in the period between saving a project file and the burn operation) you delete any music tracks, or move or rename them, CDRWin will not find this data as the project file still contains the old information about the storage location and name.

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To launch the process, select the burner you are going to use and click the CDRWin icon.

Once the burn process has started, you can stop it early by pressing the *Cancel* button .

Important points to note

- Every source title must be at least 4 seconds long .
- In addition, wave files (WAV) must be in the correct format, i.e. 44.1 kHz in 16 bit and have been sampled in stereo .
- You must also consider that compressed music files possibly have a poorer sound quality than the original files if the files have been compressed using MP3, Ogg or WMA, which are lossy. If you use these files as source material for audio CDs, you will not achieve the complete sound quality produced by an uncompressed PCM data stream as the audio data that is lost during compression cannot be restored .

Tip: If you want to include individual titles on a CD as part of a new compilation, rip the songs you want using the *Read CD/DVD* module in WAV format on your hard disk (*CD quality* with a 44 kHz sampler frequency) and add the titles from there to the new CD layout .

6.3 Ripping audio CDs

CDRWin comes with a record and conversion module that allows you to expand your music collection and, for instance, provide your Flash MP3 player with music files. It works with the ripper extracting tracks from audio CDs, while, at the same time, a converter converts the material into different music formats. It is also possible to provide the files with information about the relevant track. CDRWin can do this via a connection to the freedb database available on the Internet (only if you have an existing Internet connection). Make sure that you activate the relevant function under Settings .

Note: Refer to the documentation for your Flash/drive player to find out which audio formats your device supports. In some cases, special coding conditions must be observed, e.g. a maximum bit rate .

Ripping tracks

Decide what you want the source drive to be after you start the module. You can click the icon next to the dropdown list to refresh the content if you change CD. The information about the tracks is automatically retrieved from the Internet (if available), but can also be amended manually. This applies to both the album information (above) and the track information (click the relevant item in the list window and press F2).

Check the box next to each track that you want to have recorded and then decide the target format: WAV, MP3 or WMA. The compression process for MP3 and WMA involves a loss of quality, whereas there is no quality loss when saving files in WAV format (although they take up the most storage space).

If you have a firewall running on your computer, make sure that you allow the application to connect to the *freedb* server (a database with CD information) so that CDRWin 10 can retrieve the data for the disc inserted (e.g. track title and performer) and add it to the file being converted as additional information (e.g. *ID3 tags*). (You can find out more details about *freedb* at www.freedb.de.)

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Output settings

CDRWin 10 converts the selected tracks to one of the following formats. Refer to the documentation for your device to find out which formats can be used with your player. It should also indicate there whether a maximum bit rate limit needs to be observed and/or whether the player operates at a constant bit rate .

- **MP3:** This file format is compatible with a very large number of players, e.g. *MPEG-4/DVD player*, mobile multimedia players with Flash or hard disk memories, *iPod*, *Zune* and *PSP* .
- **WMA:** This is a Microsoft proprietary file format that is about as effective as *MP3*, but not so widespread. Compatible with specifically dedicated *MP3* sticks and Microsoft's Zune and Xbox 360 .
- **WAV:** This uncompressed audio format saves all tracks without any quality loss. It is strongly recommended if audio tracks need to be archived for a longer period of time with the best possible quality .

The quality of the tracks to be ripped can be set using the slider below the selection list for the file and compression format. Depending on how stringent your requirements are, you can decide on different levels of quality for each format. The lowest supports telephone quality (e.g. for mobile phones), while

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the highest quality is generally enough to satisfy even discerning listeners when reproduced via headphones or a stereo system .

Note: The sample frequency for the *WAV* format can reach 48 kHz. The last format is recommended for permanently archiving tracks.

Then enter the target path, and the files are saved under this folder .

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Part VII

7 Writing video discs

7.1 Creating video DVDs

The feature ‚Create video DVD' is used to create a compatible DVD for your DVD-player from a ‚Video_TS'-folder.

Note: The ‚Video_TS'-folder is just a normal windows folder. What makes the ‚Video_TS'-folder so special is that it is the root folder on a DVD, containing i.e. the ‚VOB' and ‚IFO' files which, in plain text, are used for the video- and audiostreams (VOB) and the menu-structure (IFO).

In order to create a video-DVD you have to select the source folder first. You can select the source folder via an integrated file browser which you can open by clicking on the ‚...-button' on the right side of the ‚Source'-line. After you have browsed to the desired ‚Video_TS'-folder simply click on ‚OK' to set it as the source.

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Note: After you have selected a ‚Video_TS'-folder you can see its size below the source selection. Please ensure that the inserted disk has enough free space and that your recorder is capable of burning that size and the linked format to it (i.e. ‚Double-Layer' - if you want to burn about 8,6 GB). To inform yourself about the supported sizes and formats of your recorder, please read its manual.

After you have selected the source you have to select the recorder you want to use. CDRWin will find any recorder connected to your PC so you just have to select the desired one in the dropdown menu in the ‚Target' section.
Finally click on the CDRWin symbol to start the copy process.

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Part

8 Tools

8.1 Erase disc

You can use this feature to erase rewritable discs so that you can record data on them again. The same function will actually be run if you start a copy action, but have inserted a full RW medium that has already been used.

If you click *Quick Erase* only the table of contents for the disc you have inserted will be erased. If you click *Full Erase* you will erase the entire contents of the disc. Although the first option is by far the quickest (the *complete* erase process lasts, in contrast to this, as long as a write procedure), the second one is the most secure in terms of data protection. When the table of contents is erased, it is still only the references to the files that are removed, but there are special tools available that can make them visible again.

The *Eject After Erase* option automatically ejects the deleted disc from your drive and resets the device .

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8.2 Finalize disc

CDRWin uses Track-at-Once mode as standard for burning data discs. This allows you to add one track at a time to the blank disc and you can still play it, in the meantime. On the other hand, if you want to make sure that new data cannot be added to a disc ever again, this option allows you to finalize the disc at this point and write-protect it .

Note: Various drives, especially older ones, have problems reading discs that have not been finalized .

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8.3 Disc Info

This option allows you to analyze the CD that has been inserted and provides various information, including the artist and tracks (only CD-Text audio CDs), the number of sessions and disc type (e.g. CD-R, CD-RW, etc .).

8.4 Sector viewer

The sector viewer is a HEX and ASCII viewer for the CD/DVD/BD sectors. You can view the written data of a sector by selecting it via the arrows in the "Sector #:" section.

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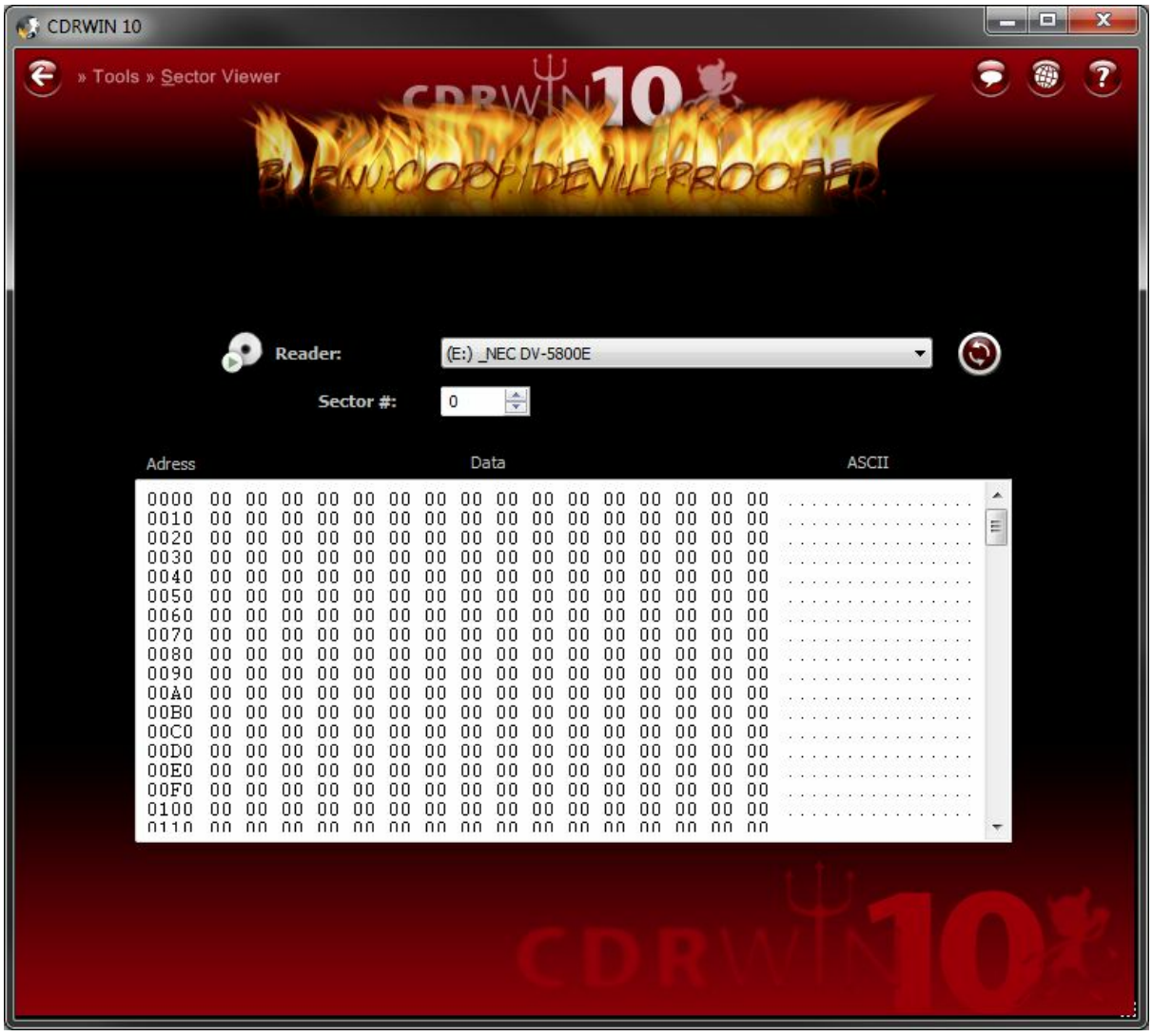

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Part

9 FAQ

I have legally purchased audio files that are not recognized by CDRWin 10 and cannot be converted .

Video files that are purchased via Internet providers such as Microsoft *Live* or Apple *iTunes* usually come with digital rights management that does not allow any use not sanctioned by the supplier. CDRWin 10 does not have any options for reading the licenses for the relevant tracks and can therefore not convert them .

Some DVD videos and audio CDs cannot be copied .

European copyright law and its application in Germany do not permit copy-protected DVDs to be copied. CDRWin 10 takes these legal provisions into account by not accepting copy-protected DVD videos as source material .

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Part

10 Glossar

(L)PCM: Linear **P**ulse **C**ode **M**odulation. Uncompressed digital audio that is superior to the quality of CDs because of the stronger sample depth (24 bits), a higher sample frequency and better dynamics .

Audio codec: A device for coding and decoding audio data, e.g. *MP3* .

AVI: ***A****udio/****V****ideo* ***I****nterleave*, a container format for MPEG-4 and other video files .

Backup: Copy of a data storage medium or program for safe keeping.

Bonded Disc: DVDs that are stuck together back to back, each with 0.6 mm thick polycarbonate substrates .

CD/DVD image: A CD or DVD image is a single (occasionally very large) file which contains the entire content of a CD/ DVD that is in the exact same form as it is going to be written to the relevant medium .

CD: Compact **D**isc. Disc-shaped medium that comprises a polycarbonate layer, a reflective metal layer and a protective lacquer. A 84-minute disc has a capacity of 650 MB .

CD-R: CD-**R**ecordable. Medium used for a CD burner that is available in different sizes (8 and 12 mm diameter) and storage capacities (21 to 99 minutes).

CD-RW/DVD-RW: Rewritable discs based on phase change technology. CD-RWs can be rewritten on average up to a thousand times .

Compression: Procedure for mathematically reducing collections of data.

Container: File for recording video and audio streams, e.g. *AVI* .

Copy protection: Various procedures that prevent a copy of a CD/ DVD being created

CSS: Copy protection on DVD videos .

Cuesheet: A Cuesheet is a text file made up of sequences of instructions whose purpose includes specifying exactly all the files and the start times for a track (including a title for audio CDs). The cuesheet is required to provide the recorder with the wherewithal to write a Disc-at-Once CD, and is created without you even noticing, when using the recorder. A cuesheet gives full control over the CD's layout. This includes not only the actual files to be burned, but also pauses between tracks, indices, pre- and post-gaps, CD text, catalog number, etc .

This cuesheet is generally created automatically by *CDRWin*. In the case of unusual operations, on the other hand, such as extensively editing the disc layout, professional users may feel it is necessary for them to become actively involved themselves in providing detailed instructions to *CDRWin*. What makes *CDRWin* different from other burn programs, in this respect, is that it gives you, as the user, first-hand access to the program, so that you also have much more influence over the layout of a disc. **Example**: Let us assume that you have created a whole CD as an image on your hard drive. A cuesheet is automatically generated by *CDRWin*. You then do not need to use the original as the template for the copy. If, on the other hand, you have recorded some tracks from an original CD or even

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only sequences of sectors using special tools, and saved them as images, it does not make any sense having a cuesheet automatically generated as the program cannot know which data should be burned and in which order .

Data conversion: Conversion from one format to another .

Data transfer rate: Speed at which the data from a medium is read and dispatched .

Decoder: Software used for decoding compressed audio and video data .

DirectShow: Part of Microsoft's multimedia interface *DirectX* used for playing audio and video files .

Direct copy: Copying a CD/ DVD directly from the read drive to the recorder (only possible if there is more than one drive available or if lengthy read attempts are not necessary to circumvent a copy protection).

DRM: Digital Rights Management ensures compliance with copy protection procedures and permissions for playing a multimedia file .

DVD: Digital **V**ersatile **D**isc (originally known as **D**igital **V**ideo **D**isc). This offers up to 17 GB of storage capacity across four possible information layers. DVDs with just one layer and one side have a storage capacity of 4.7 GB, which is sufficient for a video lasting up to 133 minutes, plus various audio tracks .

DVD-5: Single-sided recorded DVD, with a single layer holding 4.7 GB .

DVD-9: Single-sided recorded DVD, with two layers holding 8.5 GB. Around 1 GB (4.8 plus 4.8 equals 9.4) is allocated to data security .

DVD-10: Double-sided recorded DVD, each with one layer holding 9.4 GB .

DVD-18: Double-sided recorded DVD, each with 2 layers holding 17 GB .

Encoder: Software used to compress audio or video data .

File system: Logical structure that creates a system with files and directories from physical circumstances.

Image: Content of a CD or DVD copied from the program to a single file that can be loaded like a real CD/ DVD and then behave like one .

MPEG-4: Standard for compressing video data, includes various profiles, including *Simple Profile* and *Advanced Simple Profile .*

MP3: Audio compression format .

Ripping: Process where audio or video content is copied from an original CD/ DVD onto a hard disk. If copy protection procedures are circumvented in the process, this has been a criminal act in Germany since 2003 .

RSDL: Reverse **S**piral **D**ual **L**ayer. Dual-layer DVD where the track of the second layer against which the first one is read runs from outside to inside instead of from inside to outside. The change can often

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be noticed by an extremely small pause in the playback flow .

Subchannel data: “Hidden” information in the sectors of a CD/DVD .

Virtual drive : CD/ DVD drive that is not really present, but is emulated by a system drive, which you can use to load images and run their content from there .

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