

User Manual

Hektosoft Hektograph

Reproductionprogramm
Version 1.4

Preface

Hektosoft Hektograph (subsequently called Software) is an application for the Windows* operating system. The Software has been developed for use on Windows XP with Service Pack 3, Windows Vista and Windows 7.

Kommentar [N1]: (all running the 32Bit Version of the OS). The Software might run as well on the 64 Bit versions but it has not been tested to do so.

Targeted use of the software:

The Software is determined to make backups of original CD and DVD Media. The software is able to make copies of:

1. Single Session DVD (PC/360* [SplitVid] / XBOX* / Wii* [Dual Layer] / GameCube*)
2. Audio CD (CD-DA) conforming to Red Book with CDTEXT enhancement
3. CD-Rom conforming to Yellow Book
4. Multisession CD-Rom conforming to Version 1.0
5. CD-Rom XA

Kommentar [N2]: Windows Vista and Windows 7 (all running the 32Bit Version of the OS). The Software might run on the 64 Bit versions but it has not been tested to do so. Therefore we do not guarantee that the Software is compatible to the 64 Bit versions of XP, Vista or Windows 7.

Additionally the software can add Audio CDTEXT to Audio CDs and use the open Online-Database *freedb* to get tracktitle-informations. Just as easily the software allows to convert CDDA Tracks to portable formats like WMA or MP3.

Prohibited use of the software:

The Software is not intended to be used to produce copies of copyrighted media that is copyprotected and not regarded as computer program under the law, e.g. movie DVD-Media.

The Software is further not intended to produce copies of copyrighted material that is regarded as computer program but from which you do not own a valid license that allows you to make a backup copy.

* The Software does not substitute certain hardwaremodifications which might be necessary to run certain backups.

Requirements:

Prerequisite is in general a drive, that conforms to the respective standard and in addition to that it must follow the MMC command-set draft.

Prerequisite for reading of NGC disks is a Hitachi DVD-Rom drive of the following type:

HL-DT-ST DVD-ROM GDR8164B

or a compatible drive of this drive series

HL-DT-ST DVD-ROM GDR8.

Prerequisite for reading of 360 disks is a Toshiba DVD-Rom drive of the following type

TSSTcorp DVD-ROM SH-D162C

or a compatible drive of this type

TSSTcorp DVD-ROM SH-D16XX

with installed Kreon V1.0 Firmware.

Prerequisite for the use of the *freedb* database is an active online access.

Assurance:

The Software ist **free** of any *SpyWare*. The software does not collect any userdata.

The Software is also **free** of any *AdWare*. The software does not show or include any adds or commercials.

Reservation:

The UNLICENSED evaluation Version of the Software is temporarily usable. The testing is restricted to the evaluation period. After the evaluation period is expired the Software will inform the user about the expiration. It will then advice the user to purchase a full user license and quit.

Contact:

A License can be obtained at

<http://www.hektosoft.com/>

Payment is offered by using PayPal.

Questions about the software can be addressed by email at:

support@hektosoft.com

The current version of the software can always be downloaded from:

<http://www.hektosoft.com/>

License:

A user license is required for each and every operating system or PC the Software runs on. That means that running the Software on both a PC and a virtual machine on this real PC requires a valid license for both, the real PC and the virtual PC. The licensee gets the right to use Software according to this licenseagreement. The user license is not transferable in any way, because the executable binary is bound to the licensee and the price of the license takes this limitation into consideration.

For further questions about the licensing address your requests directly per email at:

info@hektosoft.com

* Windows, Windows XP, Windows Vista or Windows 7 are Trademarks of the Microsoft Corporation in USA and other Countries. Names and Trademarks are used just for the purpose of description and without warranty of any kind.

Scope of supply:

Content of the archive:

- | | |
|-------------------|---------------------------|
| ➤ Readme.txt | Description in english |
| ➤ User-manual.pdf | English usermanual. |
| ➤ cdr.exe | The main application |
| ➤ io32.dll | IO-Interface (Hektolayer) |

Copyright:

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You must treat the software like any other copyrighted material, except that you may

- (a) make one copy of the Software solely for back-up or archival purposes, and
- (b) transfer the Software to a medium required for usage, provided you keep the original solely for back-up or archival purposes, and
- (c) transfer the evaluation Version of the Software in the complete and unchanged archive (.zip) at no(!) fee to others solely for testing purposes, and
- (d) print one (1) copy of the documentation/shortdescription that the Software includes.

You may not otherwise reproduce, copy or disclose to others, in whole or in any part, the Software. You agree to use your best efforts to see that any user of the Software licensed hereunder complies with this Agreement.

DISCLAIMER:

Hektosoft DISCLAIMS ALL WARRANTIES! You are trying this Software at your own risk. However if properly installed and operated on a computer for which it is designed, the Software will perform substantially in accordance with the accompanying written materials.

YOU ACKNOWLEDGE THAT YOU HAVE READ THIS AGREEMENT, THAT YOU UNDERSTAND THIS AGREEMENT, AND UNDERSTAND THAT BY CONTINUING THE INSTALLATION OF THE SOFTWARE, BY LOADING OR RUNNING THE SOFTWARE, OR BY PLACING OR COPYING THE SOFTWARE ONTO YOUR COMPUTER HARD DRIVE, YOU AGREE TO BE BOUND BY THIS AGREEMENT'S TERMS AND CONDITIONS. YOU FURTHER AGREE THAT, EXCEPT FOR WRITTEN SEPARATE AGREEMENTS BETWEEN Hektosoft AND YOU, THIS AGREEMENT IS A COMPLETE AND EXCLUSIVE STATEMENT OF THE RIGHTS AND LIABILITIES OF THE PARTIES. THIS AGREEMENT SUPERSEDES ALL PRIOR ORAL AGREEMENTS, PROPOSALS OR UNDERSTANDINGS, AND ANY OTHER COMMUNICATIONS BETWEEN Hektosoft AND YOU RELATING TO THE SUBJECT MATTER OF THIS AGREEMENT.

Installation:

To install the Software just

- start your operating system
- deflate the archive to your harddrive at a place you like.
- select the file CDR.EXE and make a link to it on your desktop, your quickstart area or your startmenu at a position you like.

DeInstallation:

Just delete the folder to which you deflated the archive and remove the links you have created. That is all.

The Software itself does not produce any hidden junk files on your hard drives.

First Start:

When you start the Software you will see the About dialog (Image 1):

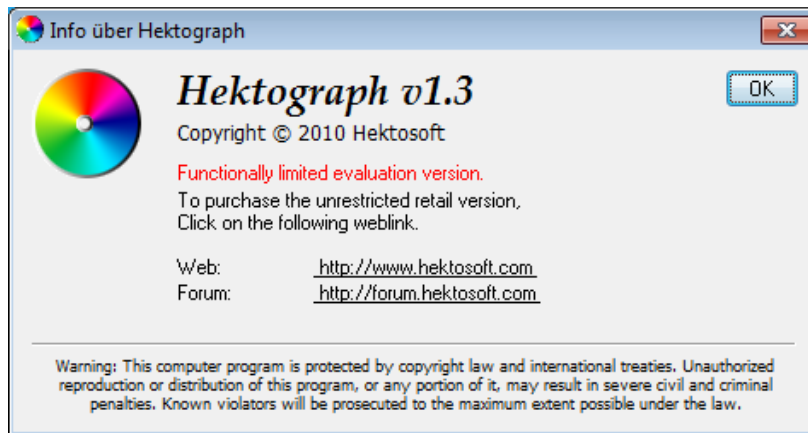


Image 1

This dialog shows the program's version and the the producer's website. To get to the website just click on the link <http://www.hektosoft.com>.

After leaving this dialog with the ESC key or the close button the software displays on first start a reminder that informs you about the beginning of the evaluation period (Image 2):

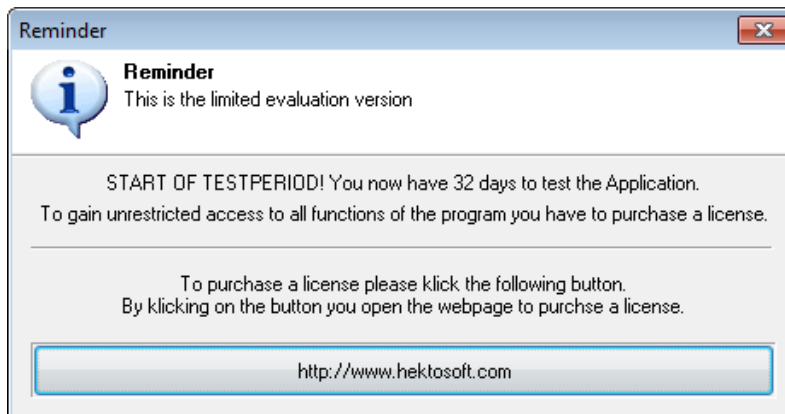


Image 2

If the user likes to obtain a user license he just needs to click the button to get to the website where he can purchase a valid license. To skip this dialog one can enter the ESC key or click on the close button.

Operation:

The User Interface

The Main Window (Image 3) consists of a well thought out user-interface.:

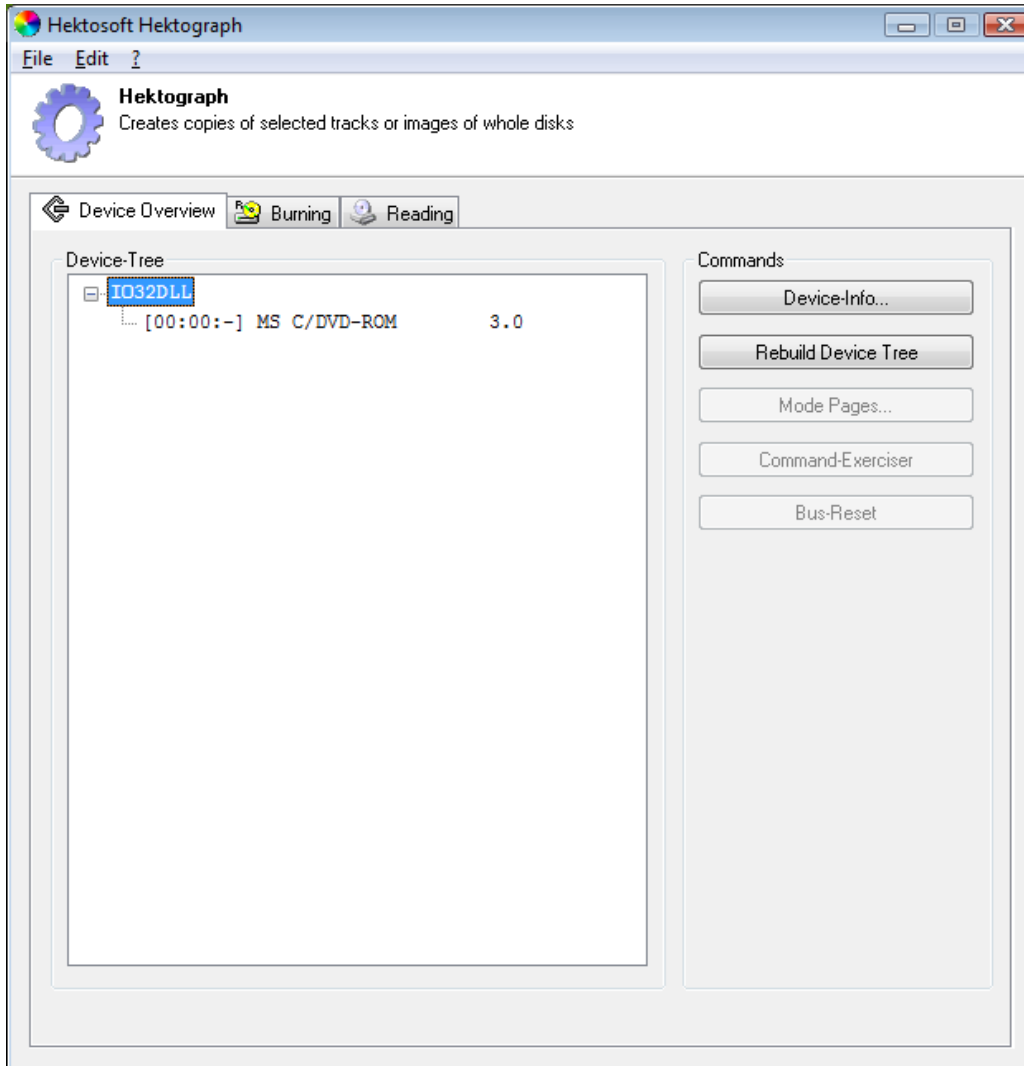


Image 3

The central element of this interface is a tabcontrol with the buttons denoted *Device Overview*, *Burning* and *Reading*. In each selectable dialog you will find a

Commands section in the right hand side of the window. This section offers you quick access to the currently available functions.

The menu structure

The menu structure has been kept as short as possible to streamline the workflow.

- The *Settings* dialog allows a few global settings (Image 4). The software is designed to not bother the user with needless technical difficulties. Therefore the settings are reduced to allow the forcing of a certain layerbreak for DVD+R DL media. The next setting is just of interest for deinstallation. It allows the user to delete the whole Registry-Entries that the Software has made in just one click.

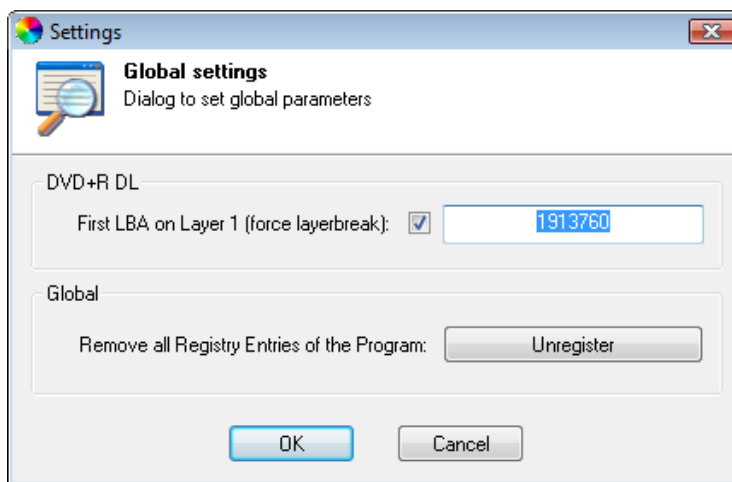


Image 4

The Software sets the layerbreak automatically for 360 and XBOX images. They just need to have the proper file extension (*.xbx or *.360). One does not need to force the layerbreak manually for these extensions.

Always keep in mind: A manual setting overrides all automatic settings.

- On *About* you get the start dialog (Image 1).

Device Overview:

On this tabbed dialog which appears at the application's start one gets a treeview which shows all detected optical drives. The software supports just CD or DVD drives that the operating system has properly registered.

Commands

Device Information

On a double click on a device in the treeview one gets a device info dialog that shows the inquiry and capacity information about the selected device (Image 5):

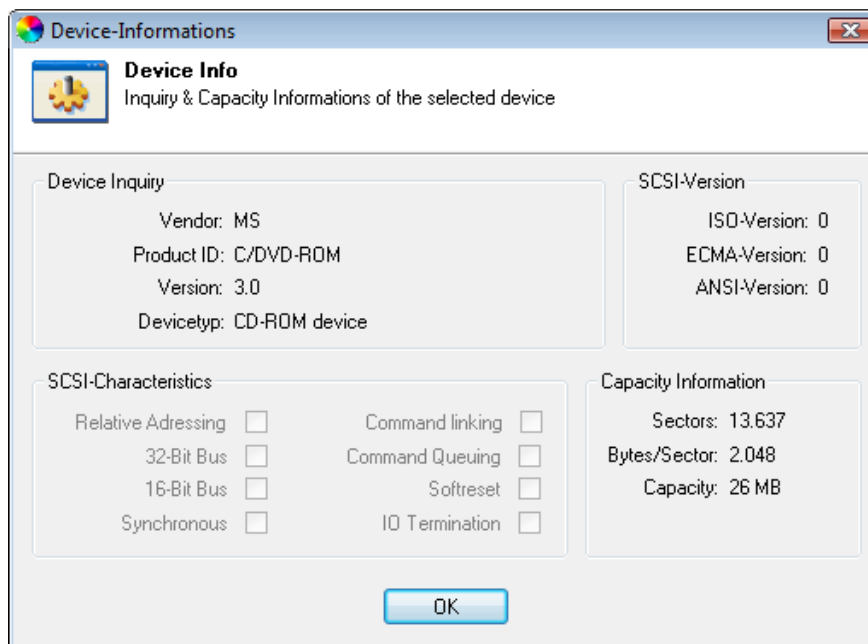


Image 5

Mode Pages

CD-Rom devices may have so called Mode-Pages. These pages can be viewed and edited by the mode pages dialog (Image 6). One just selects a device and clicks the command *Mode Pages*.

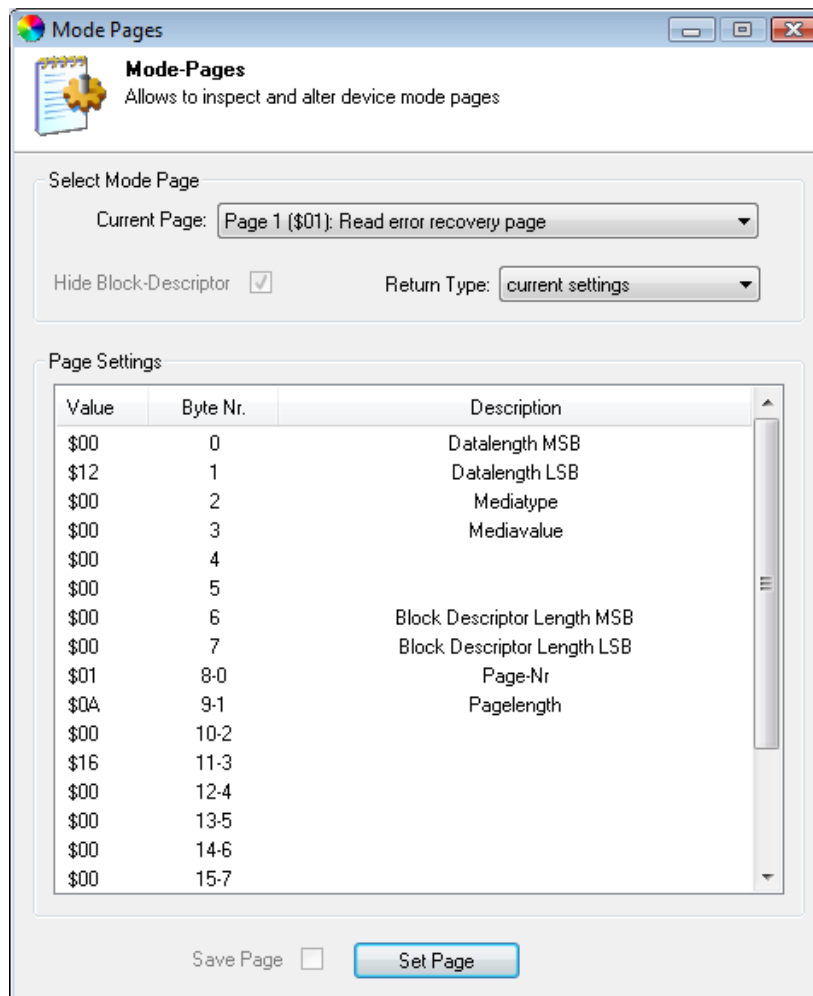


Image 6

To select one of the available pages one clicks the Drop-Down Menu *Current Page*. The „\$“ sign is the hex number prefix. The returntype allows to get a list of all changeable bits in the page. To change the page one has three options:

1. The user can Select a certain value and press the F2 key. (Image 7). One can enter values between 0 and 255. Alternatively one can enter the value in hexformat by entering a „\$“ sign first as prefix.

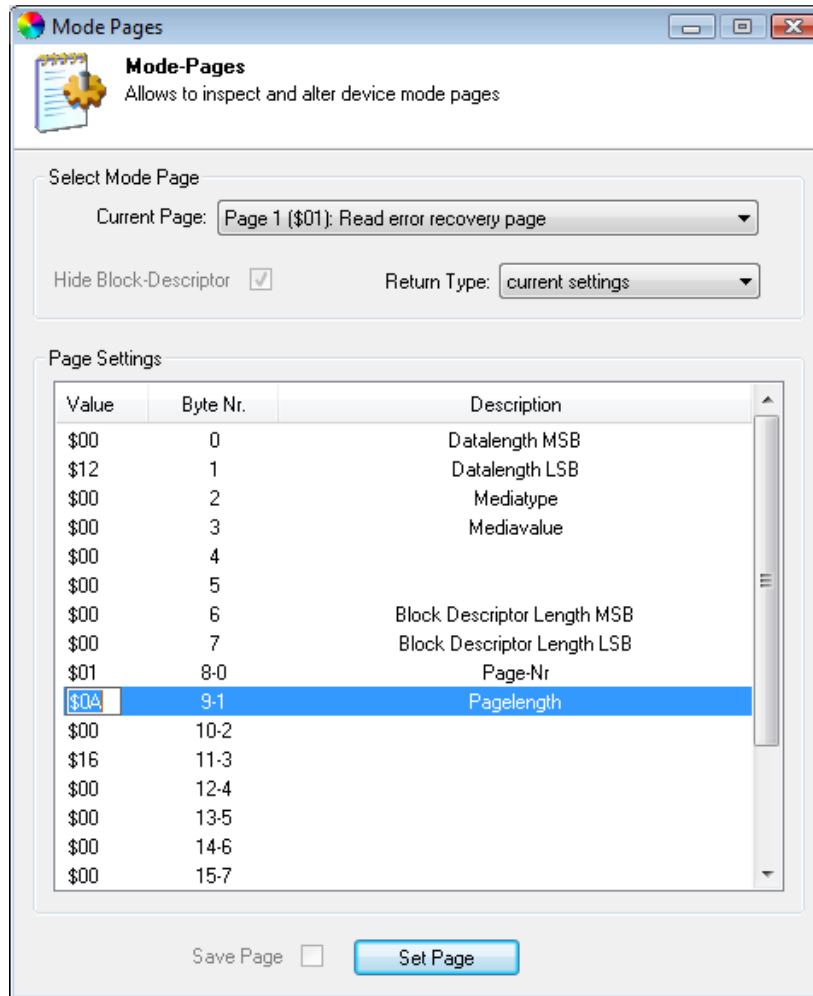


Image 7

2. The second method is to click once on a value and then wait a second without moving the mouse cursor.
3. The third method of changing a value is to double click on a value. On doing that one opens a bitfield dialog (Image 8) which allows to change each individual bit.

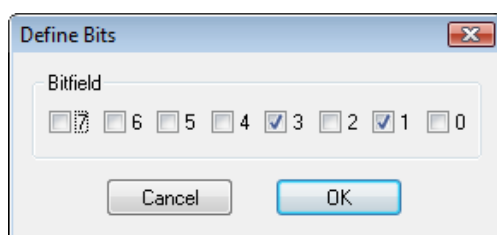


Image 8

If the editing effort has been finished one can send the edited page to the device by clicking *Set Page*.

Sending Mode Pages into the device is possible only with the fully licensed version of the Software. If you do this with the evaluation version you get a reminder to obtain a license for the full version.

Command-Exercizer

The mightiest tool in the device overview is the command exercizer (Image 9).

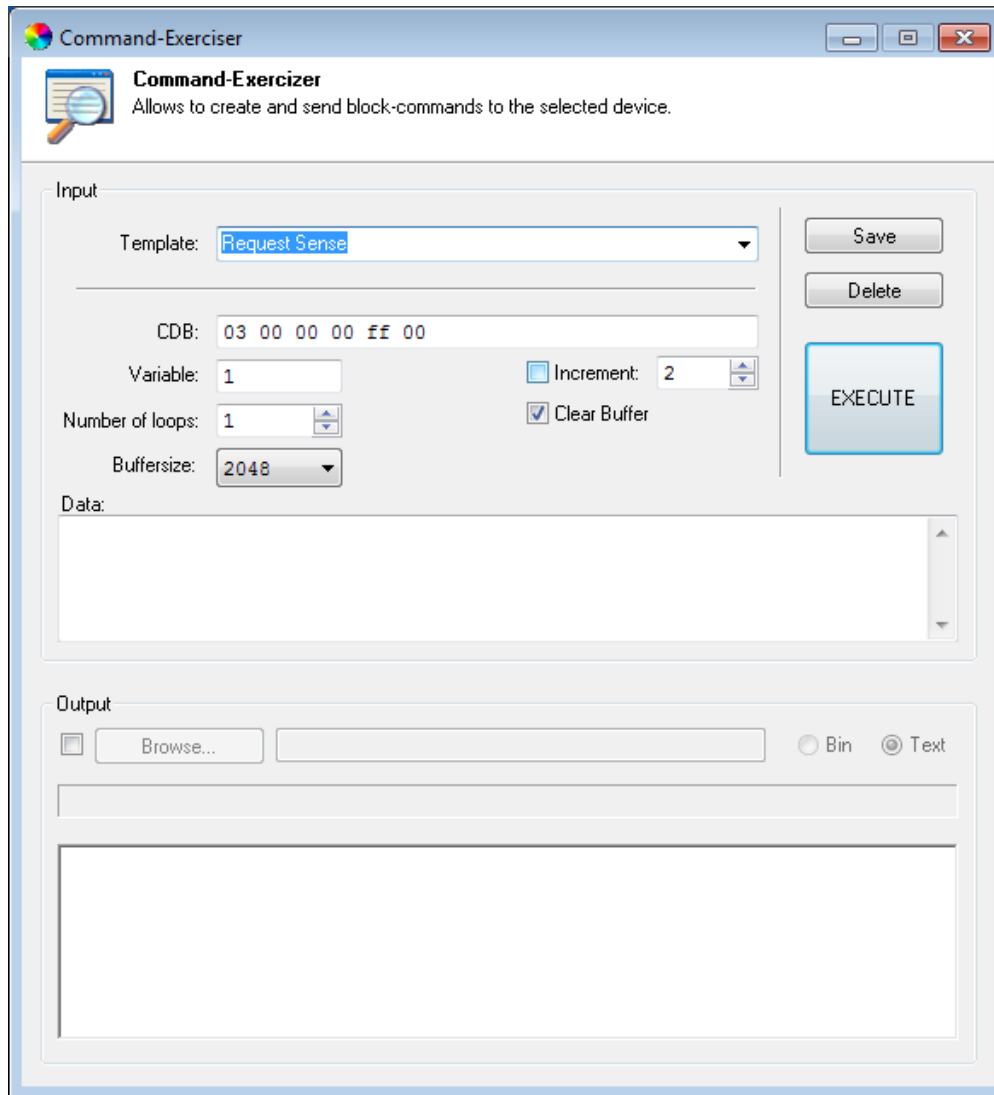


Image 9

This versatile tool allows you to expand the available commands with a nearly unlimited number of further commands that you can design according to your needs.

One can give each of the commands it's own template name and save it to the harddrive or remove them again. To do so one uses the *Save*. and *Delete* buttons.

The userinterface expects HEX values at the following fields: *CDB*, *Variable* and *Data*. All other fields expect decimal input.

Commandbytes have to be entered in the CDB field. Permissible input are 6, 10 and 12 Byte CDBs (Command Descriptor Blocks).

The Software checks for correct In- and Out-Direction. Therefor the command has to operate just in one direction. It is strictly prohibited to define a command that expects data and at the same time sends data. Therefor it is forbidden to enter *Data* and define a *Buffersize* other than 0. The buffer is always for input only!

One can also let the command automatically be repeated several times by setting the *number of loops*.

One can also place a variable in the *CDB*. The variable has to be preceded by the „#“ sign and followed by a number between 1-4. The number defines how much bytes are occupied by the variable. A #1 represents one Byte a #2 represents two Bytes and so on. The Software then inserts the variable in Motorola notation at the specified position before the CDB becomes executed.

If for example one enters in the variable field the value 11 22 33 44 and inserts in the CDB the representative #3 at a certain position, the software will insert at that position the Bytes 22 33 44 in the final CDB before execution.

In the output group you can select that you want to save the output of the command in txt or in binary format. Just click on the checkbox and enter a filename.

To finally execute your command just click on the EXECUTE button. You then get the resulting sensecodes and the execution time presented in the output area.

Sending commands to the device is possible only with the fully licensed version of the Software. If one does this with the evaluation version a reminder pops up to obtain a license for the full version.

Burning:

In the tabdialog Burning (Image 10) one can burn imagefiles to disk.

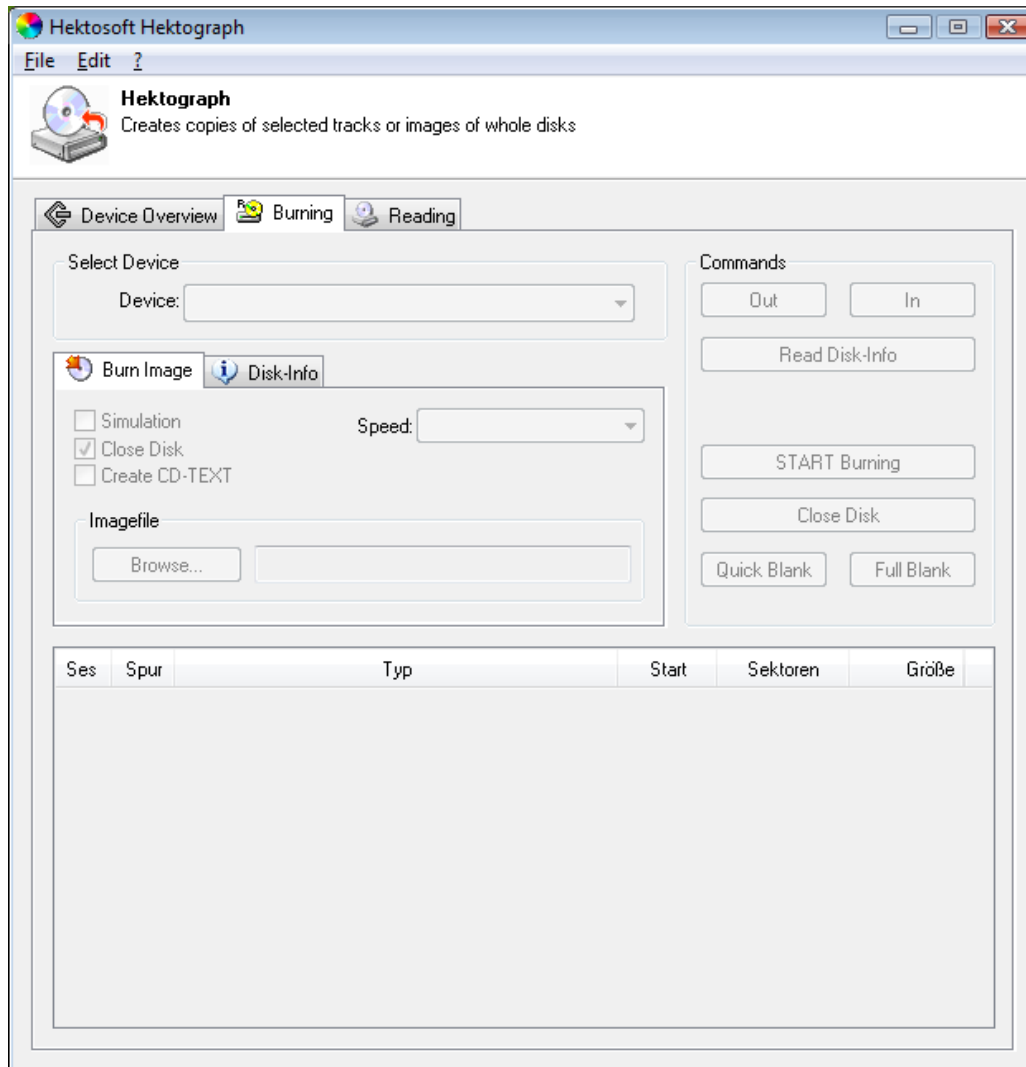


Image 10

To do so one has to select the *Recorder* to use. If just one is installed, it is already preselected. In the right hand side of the dialog are again the available commands.

In and Out

These buttons open and close the device's tray. The Software automatically detects, if the tray is already open.

Disk-Info

One has to insert an empty disk to go on. The recorder detects the media type and available speeds. The necessary time varies between products.

If the burner is ready to receive commands the *Disk-Info* button becomes enabled. With *Disk-Info* one can read out certain informations about the media. These informations are presented in the middle of the dialog, in the Disk-Info tab (Image 11).

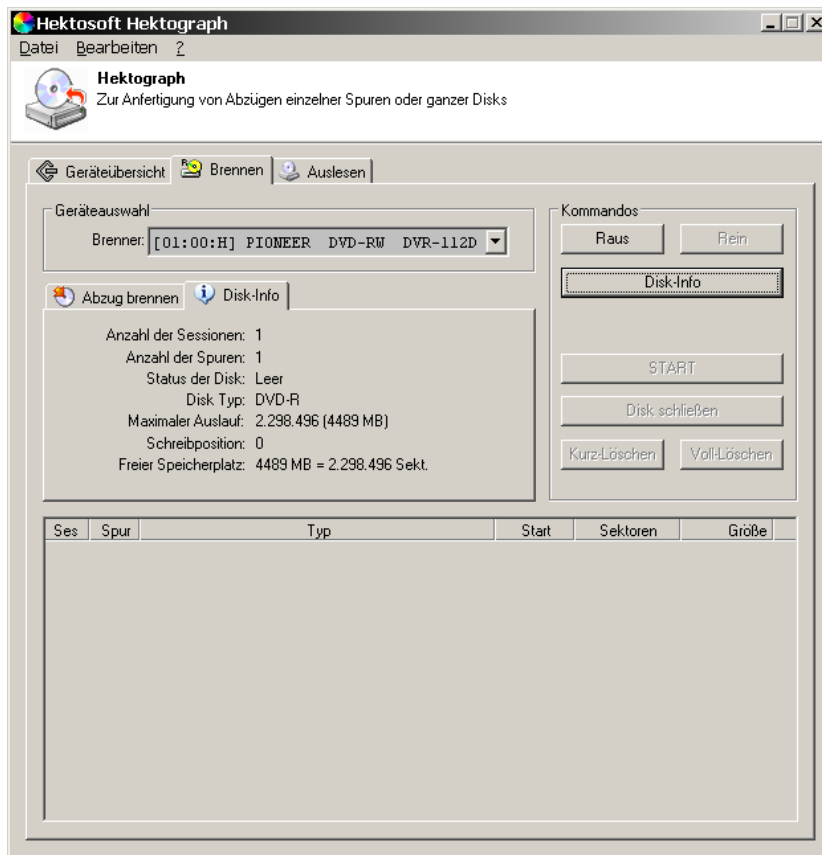


Image 11

Burn Image

To burn an image file one selects *Burn Image* on the tab control in the middle of the screen (Image 10). The *Browse* button allows to select the image file.

One just needs to choose a supported format (Image 12) and click open.

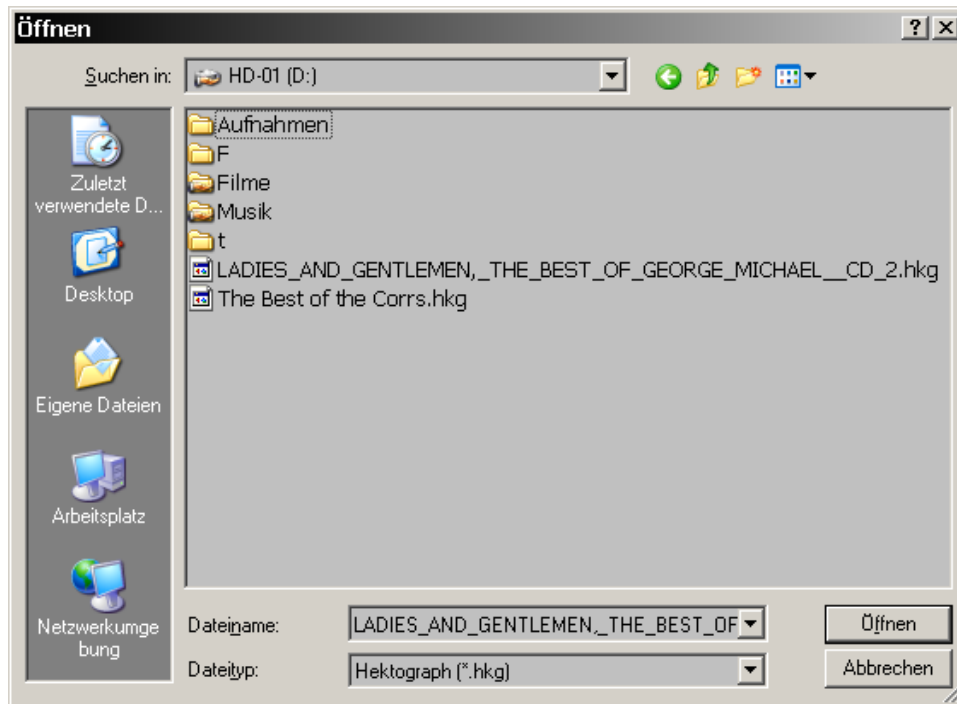


Image 12

After the selection (Image 13) the Software presents the information in the lower half of the dialog. If the image contains tracktitles one also gets the option to burn them as CDTEXT.

On CD or DVD-R/RW media one gets the option to simulate the burning. That option is not available for DVD+R/RW media, because these disk-types do not support that feature by definition.

As third option one can select to close the disc after writing. By default one should select that option.

Buffer-Underrun technologies are used automatically if available.

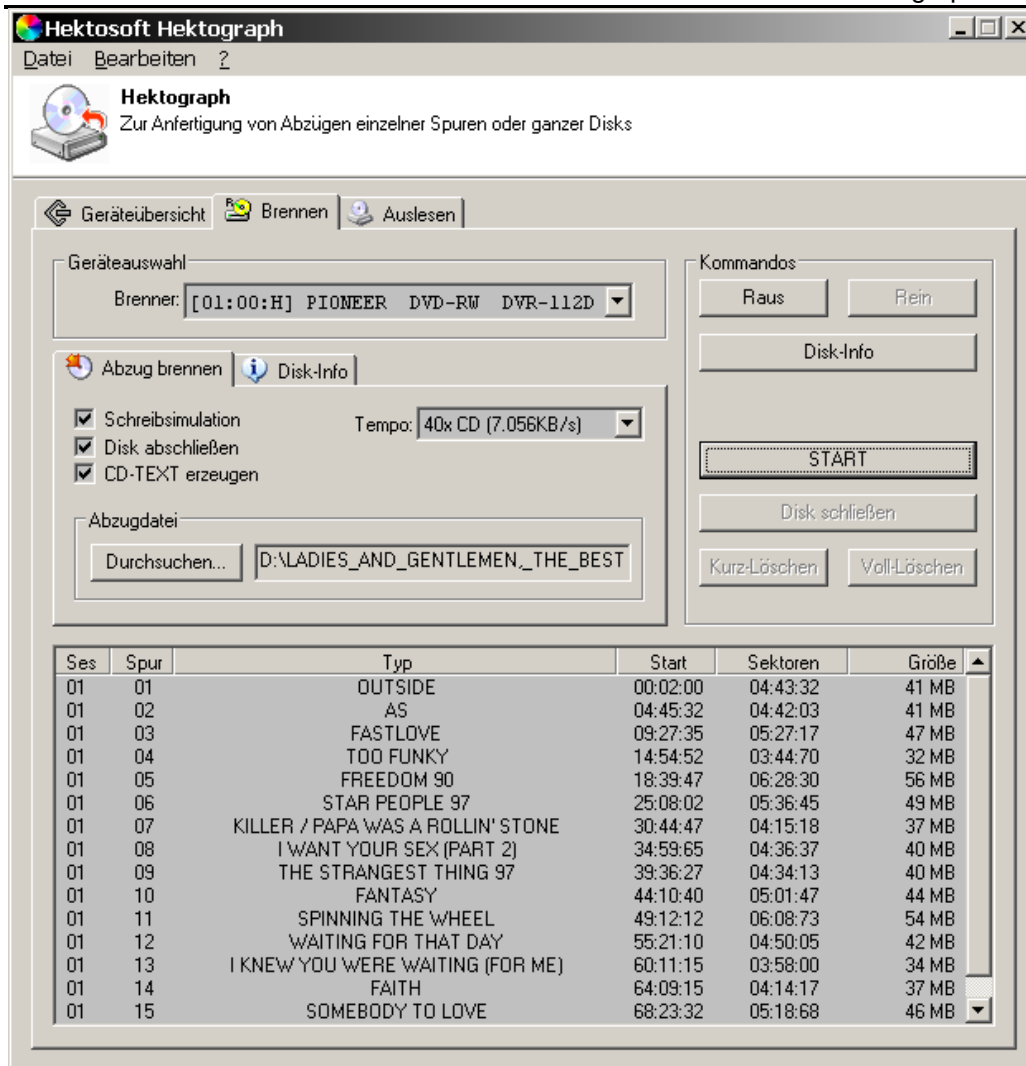


Image 13

Supported Formats

1. *.HKG, Hektograph's own format.
2. *.ISO, any image conforming to ISO9660.
3. *.NGC, image of original Nintendo Wii oder Gamecube media
4. *.XBX, Image of original XBOX Media
5. *.360, Image of original 360 Media
6. *.CUE/BIN, Image made by DAO oder CDRWIN from Jeff Arnold. Expansions of the original DAO format by using the REM statement are not supported. Only one FILE statement is allowed in the CUE. The filename must not have spaces or be enclosed in quotes.

Start Burning

To start one has to insert a blank medium. The Software accepts only complete blanks because it always records in „Disc at Once“ mode.

One has to have an eye on the speed when using DVD Media, especially +R DL. Several recorders offer you high recording speeds that exceed the certified speed of the media itself. One should be very careful if the recorder shows you 10x on an 8x media or 22x on a 16x media. In such cases it is very likely that the recorder does not have a proper recording-profile for that media. It is always a safe bet to reduce the recording speed to 4x on 8.5 GB +R DL disks or to 8x and 16x on 4.7 GB DVD media. Otherwise the risk that the recorder produces write errors or damaged disks that force the abortion of the recording process is very likely. That is not a flaw of the Software but a flaw of the hardware.

The available write speeds are determined for each blank individually.

If ready one clicks the *START burning* button. The recording Dialog opens, which allows to survey the recording process (Image 14).

The top bar is a progressbar.

Below that are additional bars that should be as max as possible under optimal conditions. The lower of the two bars should fluctuate a little. That is normal and shows that the display works correctly. If the internal buffer runs low your hard drive is not fast enough for the selected recording speed.

At the beginning of the recording process it may seem as if the Software hangs. But that is not the case. The software has to wait for the recorder until it has finished its preparations on the medium. That period may last a few seconds in which the software stands still. Some burners use a “fall back” strategy on high recording speeds that exceed the media's limit although these recorders offered that high speed in the first place. The worst case of such a scenario is a fall back to the slowest recording speed the recorder supports. That behaviour is totally transparent to the Software and can only be avoided by following the media's speed certification when selecting the recording speed.

After the initiation period the recording goes on and the device buffer becomes filled.

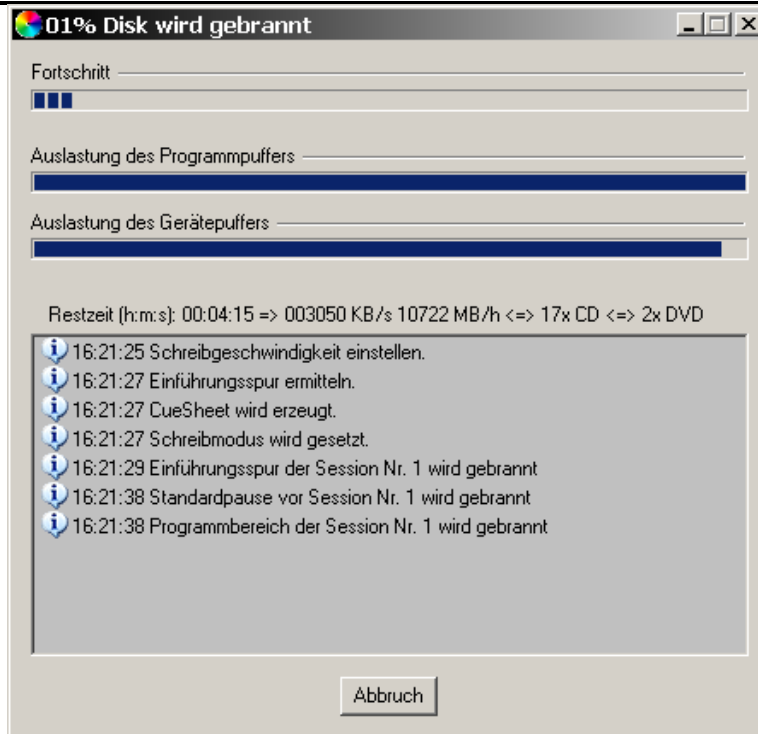


Image 14

At certain points during the recording the Software has to wait for the recorder to finish certain operations. Then a little extra dialog may appear which shows the progress of an intermediate operation (Image 15).

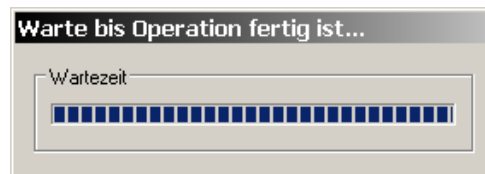


Image 15

If that progressbar stays unchanged at 0% or 100% that is not a flaw of the Software but a flaw of the hardware. The reason for this is the fact that certain recorders just report the same progress indication the whole time. This is in fact a flaw of the recorder's firmware.

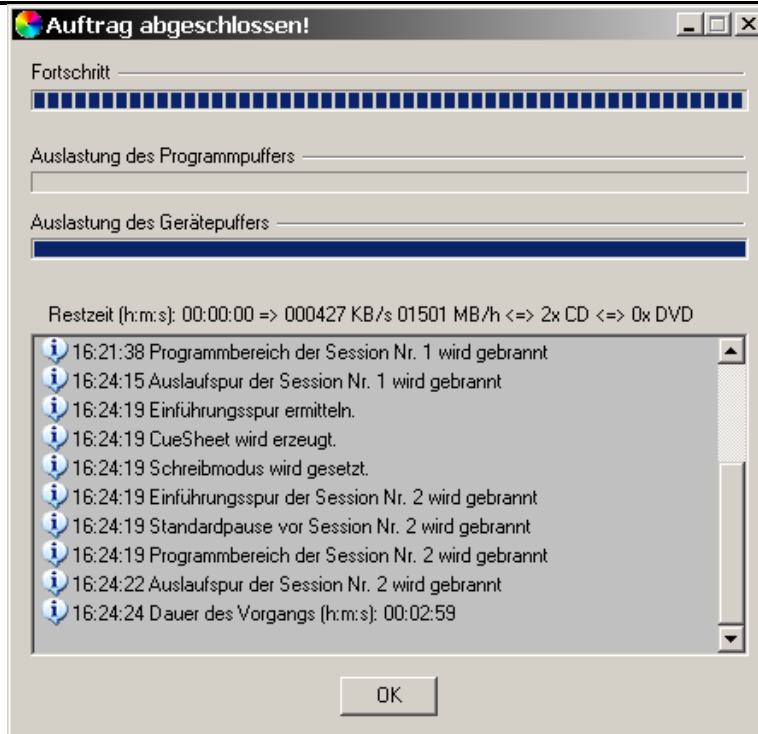


Image 16

If the recording has finished, the Cancel button changes its reading from Cancel to OK. To close the dialog one just has to click OK.

The media is at once accessible. There is no need to throw out the disk before accessing it.

Reading:

With the Reading tab (Image 17) one can create imagefiles of original disks as well as convert tracks of Audio CD's into formats suitable for portable musicplayers (e.g. WMA oder MP3).

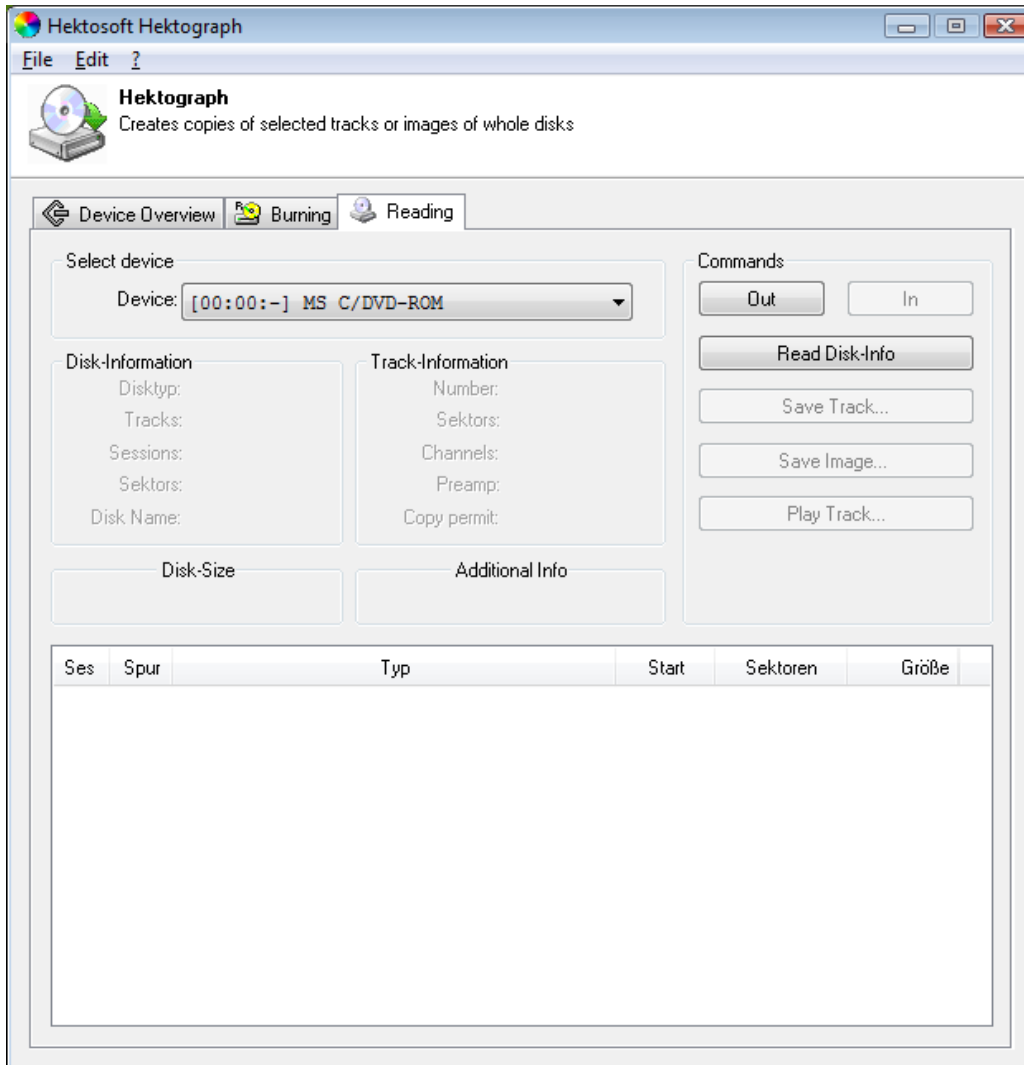


Image 17

To do so one selects the reading device to use. The command area is again in the right hand side of the dialog.

In and Out

These buttons open and close the device's tray.

Disk-Info

Inserting the source disk makes the drive ready to go on as soon as the recorder has detected the media. The necessary time varies between products.

If the device is ready to receive commands the *Disk-Info* button becomes enabled. With *Disk-Info* one can read out informations about the content of the disk. This information is presented in the left hand side of the dialog (Image 18).

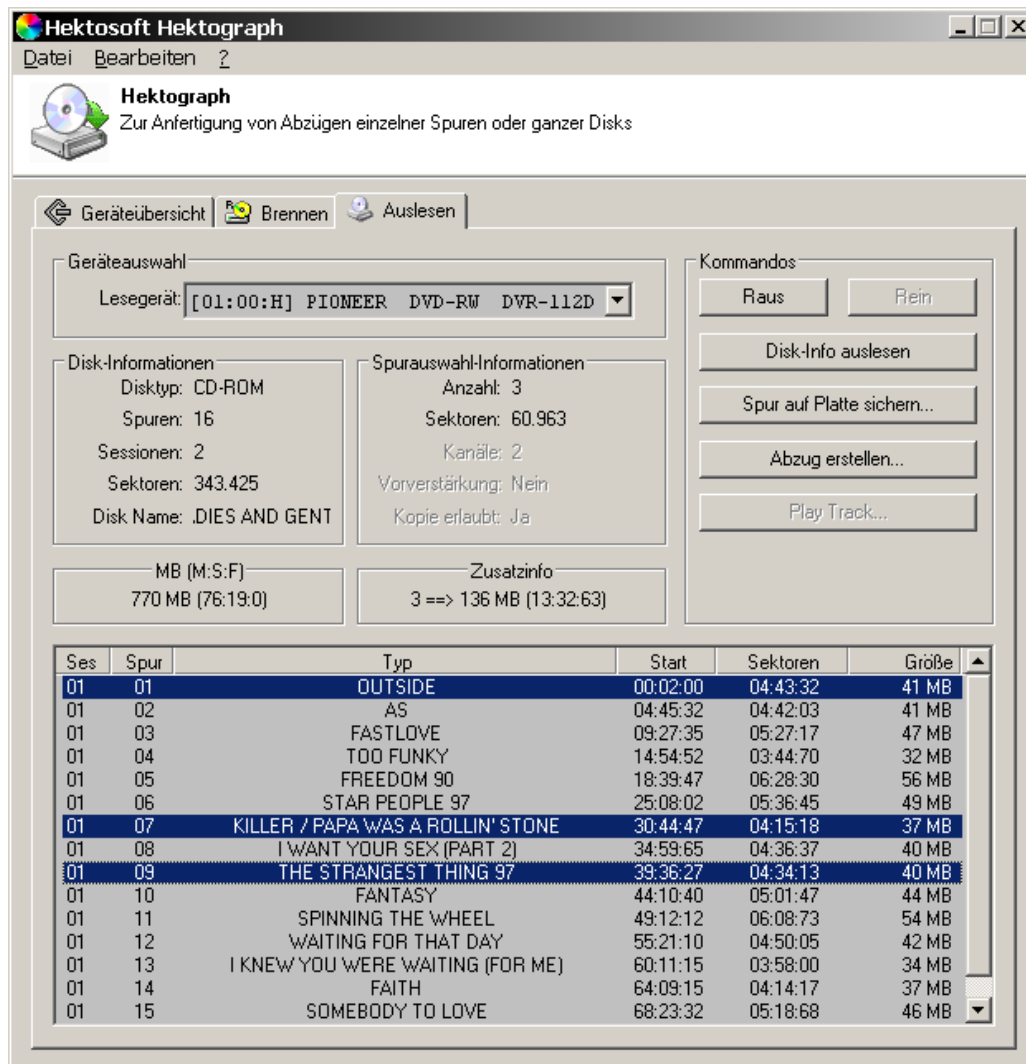


Image 18

CDTEXT and FREEDB

The Software automatically tries to read out CD-TEXT Informations to detect the tracknames. If that fails the Software tries to get the tracknames from a free onlinedatabase called *freedb*.

Save Track

To save a certain track one needs to select it in the list control by clicking on it. To select multiple continuous tracks one can press and hold the *Shift* key while clicking on the first and the last track of the block.

One can also select multiple specific tracks. To do so one can press and hold the *Ctrl* key while clicking on each individual track.

In the trackinformation area of the dialog the Software calculates the size and playtime of the selected tracks automatically (Image 18).

The one has to click on the *Save Track* button to open the Save dialog (Image 19).

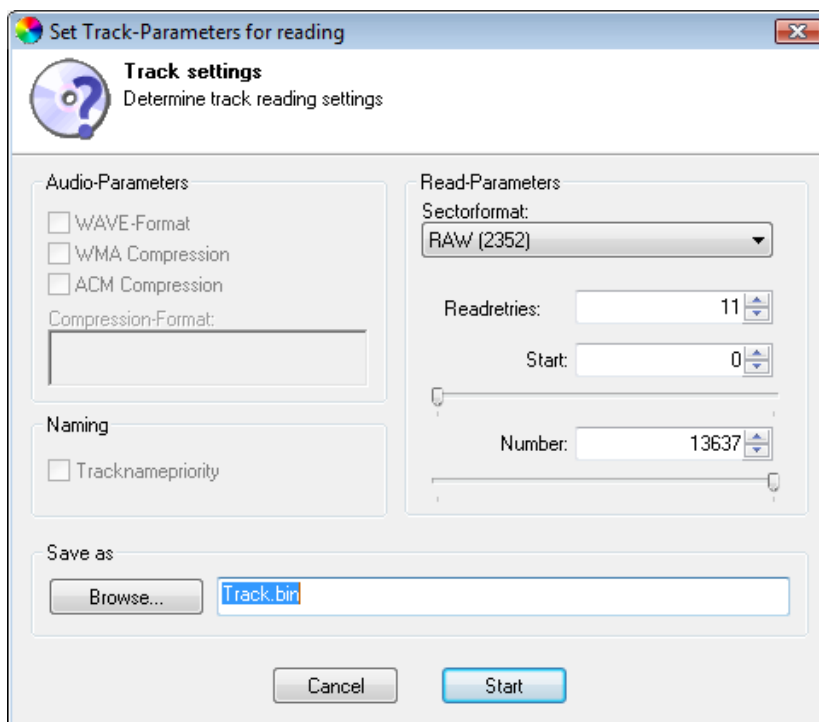


Image 19

The reading process starts by clicking on the start button (Image 20).

The reading dialog allows to survey the reading process. The workload display is best, if the workload for the commandbuffer is as high as possible and if the workload for the databuffer is as low as possible. If the databuffer workload increases your harddrive is not fast enough to write away the incoming data at the same speed it is coming in.

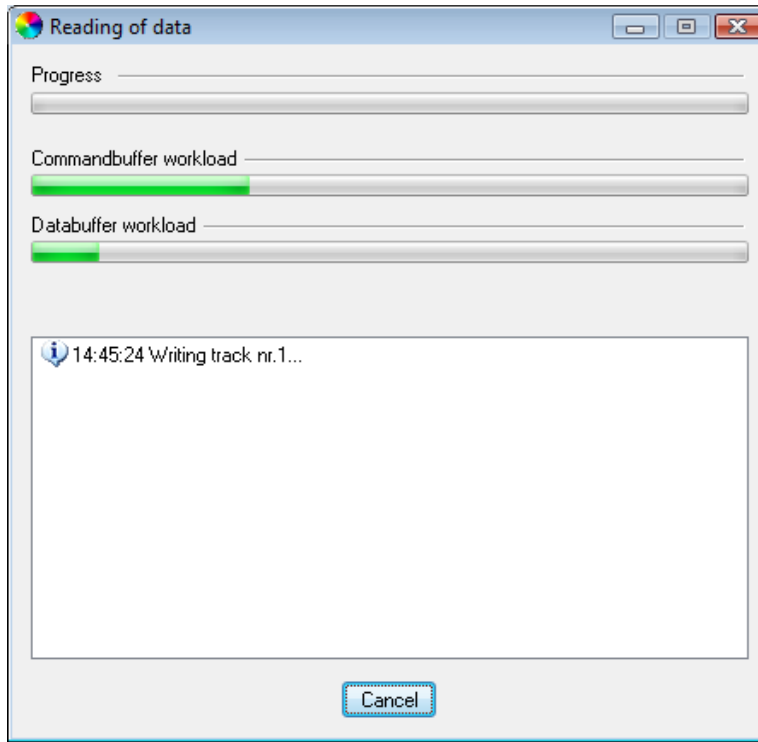


Image 20

Save with audio compression

On audio tracks one can select the target format in the *Audio-Parameters* group. By default *WAV* is preselected. Alternatively one can use the **A**udio **C**ompression **M**anager (ACM) to compress the audio data before it is put into the WAV container. If selecting MP3 as ACM format one does not even need the WAV container.

Alternatively one can also select WMA as target format. In both cases one gets a selection dialog to choose the target format (Image 21).

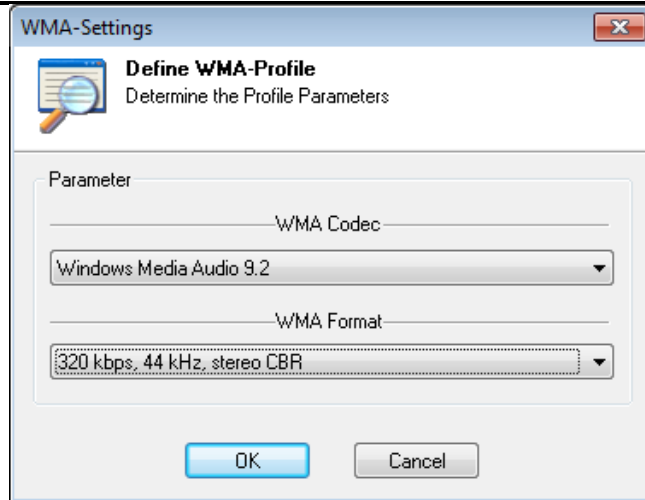


Image 21

In the WMA dialog one can select the codec and the format. Possible choices depend on the installed codecs. Für most situations the WMA 96kbps, 44KHz, stereo CBR is sufficient. The WMA Codec compresses extremely fast and retains good quality.

Alternatively one can use one of the installed ACM Drivers for compression. To do so one selects the *ACM* checkbox and a system dialog opens. In this dialog (Image 22) one selects the ACM driver and the target format. To use MP3 one has to have an encoder ACM for MP3 (typically the Fraunhofer IIS or the LAME driver) properly installed.

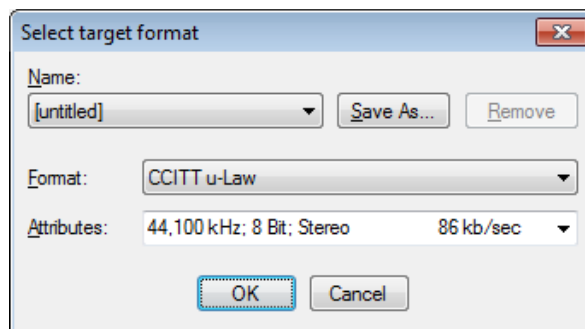


Image 22

As mentioned above one can combine the *ACM* and the *WAV* selection.

To get an overview about the installed ACM drivers one can choose *ACM Settings* from the Menu to get a special dialog from which to administre the ACM drivers (Image 23).

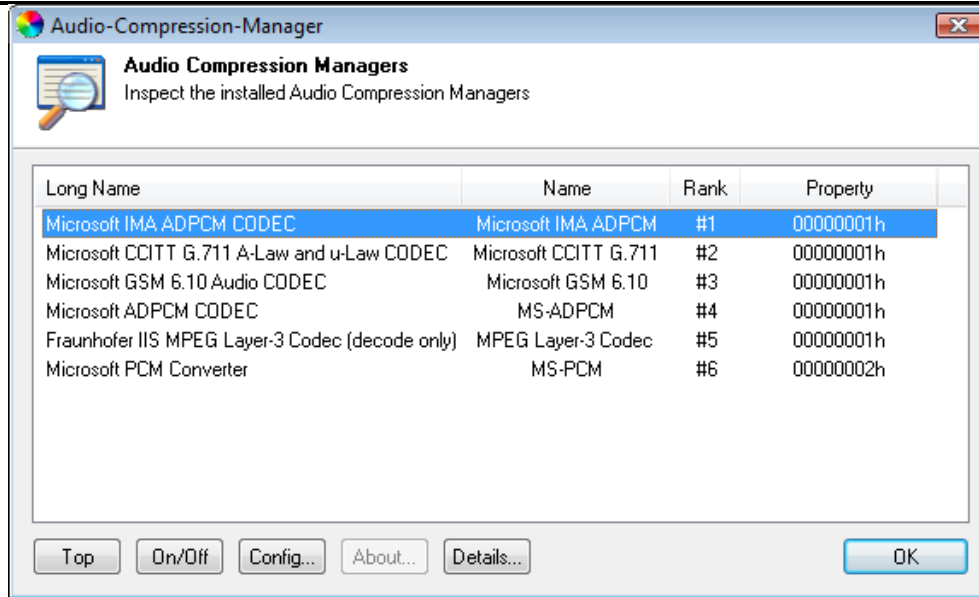


Image 23

In this Dialog one can move a preferred codec to the *Top*. This ranking is also used in the selection dialog (Image 22). One can also disable unused drivers with the *On/Off* buttons. Deactivated drivers do not show up in the selection dialog. Certain drivers offer configuration- or about- dialogs. To open them click on the *Config* or *About* buttons if they are enabled.

On clicking the *Details* button one get further indepth information about the ACM driver (Image 24). **One reminder:** with „decode only“ versions one can **not** encode! You do not get these ACM drivers shown in the codec selection dialog. Therefor on Windows Vista or Windows 7 one does not get the MP3 codec offered in the compression selection dialog. One has to install the encoder version first. This version is already included in the operating system and just has to be activated[†]. The LAME ACM driver is usually included in most codec packs available over the internet.

[†] How to do this is beyond the scope of this document. Look at our forum <http://forum.hektosoft.com> for more information about this topic.

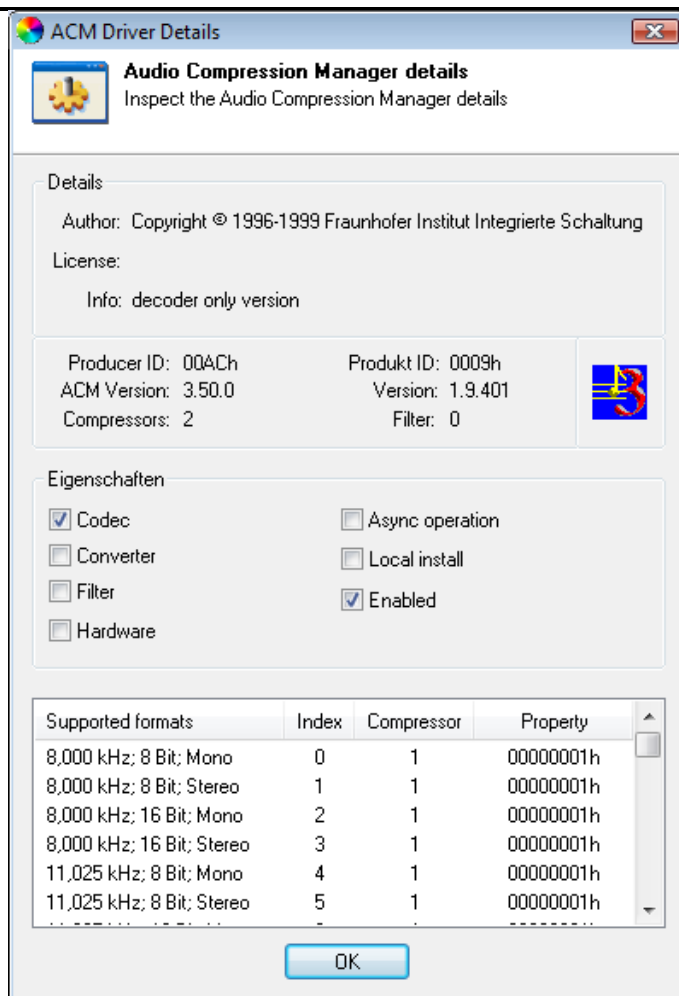


Image 24

Tracknaming

On saving multiple audiotracks one can select the *Tracknamepriority* checkbox (Image 19). That forces the Software to override the trackname with the tracktitles read from the disk (CDTEXT) or with the tracktitles from the onlinedatabase *freedb*. Clearing that checkbox means that the software takes the entered filename and precedes it with the tracknumber.

Play Audiotracks

Inserting an Audio CD adds the option of listening to individual Tracks before operating them. One can select a track and click *Play Track* to hear it over the installed sound hardware. On doing so one gets the Play Track dialog (Image 25).

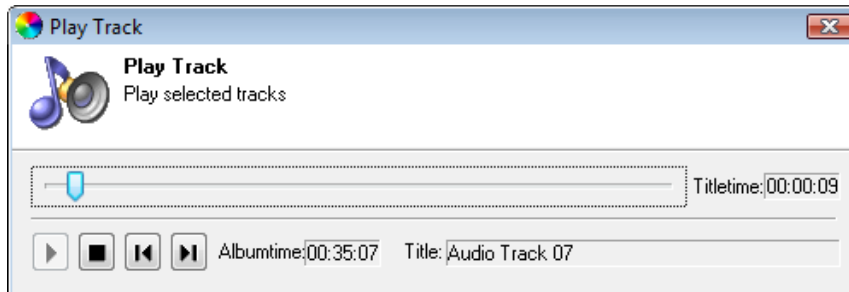


Image 25

One can control the playback by the use of the well known buttons on the bottom of that dialog. To leave the playback one can press the ESC key or click the close window button in the upper right hand corner of the dialog. The playback stops automatically on closing the dialog.

Creating Images

Images from common Datadisks

One just inserts the source disk in the drive. The one clicks the *Disk-Info* button. Finally one clicks the *Save Image* button and enters the filename for the image into the freshly opened dialog and clicks the OK button to start the image creation.