

Sonoris DDP Creator 3.0

User Manual

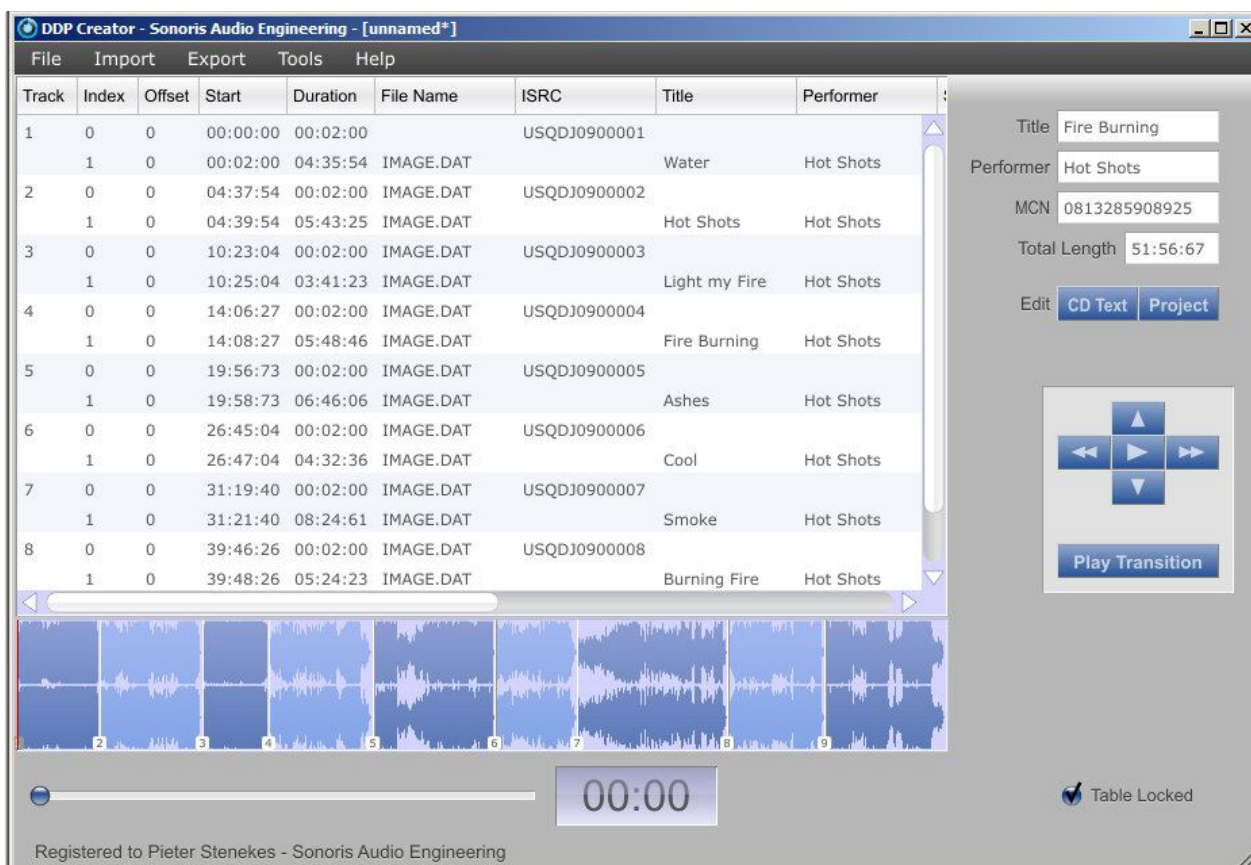


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Introduction

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Thank you for choosing Sonoris DDP Creator!

What is it?

The Sonoris DDP Creator is a standalone Windows and Mac CD authoring application compatible with virtually any DAW software on the market. The DDP Creator lets you assemble professional RedBook compatible audio CD's and supports the import and export of DDP 2.00 images and Cue Sheet (cue) files. It also enables you to burn and rip audio CD's and send off images with FTP.

CD authoring

With the DDP Creator you can assemble a RedBook compatible CD by just dropping wav, aif or flac files or even m3u files on the workspace and set the track order. After that you can adjust the spaces between tracks and audition this by playing back the transition from one track into another. Then edit the PQ points, ISRC, MCN and CD-Text data. Finally export to DDP, Cue Sheet or CD and print a PQ sheet if needed.

DDP export

The main feature of the DDP Creator is the export of the CD project to a DDP 2.00 filesset. The industry standard DDP protocol is supported by all major CD replication plants and ensures an error free transfer and manufacturing of your masters. No more need to burn a physical and error-prone master anymore!

DDP import (loadback)

Besides DDP export the DDP Creator can import (loadback) a DDP filesset too, including DDP images made by other software, like Sonic Studio HD, SADiE, Sequoia or Pyramix. This feature allows you to check the project including all PQ codes, ISRC, MCN and CD-Text data. You can edit the project, playback tracks and export to DDP, Cue Sheet or burn a Redbook compatible CD from it.

Never worry any more about the integrity of your DDP masters.

Pro version

The Pro version adds even more functionality to the DDP Creator. With this option you can measure and normalize the tracks using the ITU-R BS.1770-2 / EBU R128 loudness recommendation. It also adds Enhanced CD support to the DDP Creator allowing you to open and export Enhanced CD DDP files and CD's. Adding a data session to an existing DDP filesset is also possible.

Other Pro features include 24/32 bit support, .csv CD text input, mp3 and aac encoding with file tagging.

About this helpfile

This helpfile explains all settings and options to get started.

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Features

- Supporting import and export of .wav,.aif and .flac files and .m3u files
- Re-ordering of tracks
- Add/edit ISRC, MCN and CD Text per track and/or for the project
- Add/edit track indices, even on the fly during playback
- Playback of tracks or project
- Adjust and playback transitions between tracks with pre-roll
- Export DDP 2.00 image files
- Import DDP 2.00 image files (loadback)
- Cue Sheet (cue) support
- Pyramix .pmi CD image support
- CD Architect .cda CD image support
- CD Text binary file import and export
- Audio CD burning
- Audio CD import (ripping)
- Data CD/DVD burning
- MD5 checksum files automatically created
- MD5 checking
- MD5 checker (Win/Mac) executable included in DDP image
- RedBook compliance checking
- PQ Sheet pdf export with additional project fields
- Safe FTP uploading of DDP images with verify of the uploaded data and resume of broken uploads
- Time display selectable between disc time or track time
- Auto entry of Title fields after filename
- Waveform display with zooming

Pro features

- Loudness measurement and normalization of tracks using the ITU-R BS.1770-2 / EBU R128 loudness recommendation
- Gain adjustable per track
- Dithering to 16 bit (if needed and wanted) with TPDF, HP-TPDF and 3 noiseshaping flavors
- MP3 and AAC encoding
- File tagging for FLAC, MP3 and AAC files using CD text data
- Enhanced CD support
- Import of CD text with .csv files
- 24 and 32 bit file support

Basics

Audio format

A CD holds 16 bit, 44.1KHz stereo audio. This audio is stored in a whole number of frames, where every frame consists of 2352 bytes of audio. At a sample rate of 44.1KHz this means that the frame rate is 75 frames / second.

Tracks and indexes

A CD can hold 99 tracks. Normally each song gets a track number, but it is also possible to have more tracks in a song. This can be useful if you want to give sections in a song a separate track number, as is common on classical recordings.

Another, less common way to divide a track in sections is to use indexes. Some players show them but it is not widely supported. Every track can hold 99 indexes. Index 0 is a special index, it defines the pre-gap or pause before the audio starts. Most players show index 0 by a negative countdown to zero. It is not mandatory to use the index 0, if you don't use it then you end up with a gap less CD (if burned in SAO or DAO mode). However, the very first index on a CD does have to be an index 0 entry of 150 frames (2 seconds) length minimum as is defined by the RedBook standard. It is also mandatory to have an index 1 for every track.

An index 0 entry normally defines a pause between two tracks, but it is possible to fill it with audio. While this is not strictly RedBook compatible, it is supported by many players. The DDP Creator supports this feature too.

ISRC, MCN

It is common to add a media catalog number to a disc. This MCN number the standard UPC/EAN number and should conform to the specifications of the UCC and EAN. EAN numbers are 13 digits long and UPC numbers 12. UPC numbers should therefore have an extra 0 at the beginning. The last digit is a checksum of the preceding digits.

ISRC numbers are issued per track and have the following format:

CCXXYYNNNNN, where CC is the 2-character country code, XXX is the alphanumeric registrant code, YY are the last two digits of the year and NNNNN is a unique 5-digit number.

Please note that there should be only one ISRC code on a track and that it is only valid on the first index entry for each track.

Enhanced CD

Besides audio data a CD can also hold computer data like images, videos, songtexts or even program files. A CD with additional data is called an Enhanced CD. It is possible to add data in the space before the first track or as a separate data session on the CD. The DDP Creator supports the extra session as this is the most common and compatible format. When an Enhanced CD is played back in a normal CD player it will play just like any other audio CD. But when this CD is opened on a Windows PC or Mac it will show the data session as an extra drive.

Loudness measurement and normalization

The DDP Creator complies with the ITU-R BS.1770-2 / EBU R128 loudness recommendation. More information can be found here: <http://tech.ebu.ch/loudness>.

Main screen

After starting the DDP Creator a screen will open. At the left you find a large window that holds the project workspace. At the right you find text boxes and a few buttons. At the lower side a waveform of the audio is displayed.

Workspace

Here you can add tracks and assemble the CD layout. The workspace consists of a table with the following columns:

- **Track:** track number of the entry, ranging from 0 to 99. After all files are added you can change the order by dragging a track to a new position. Note that before you can do this you have to unlock the table by deselecting the checkbox at the bottom of the screen.
- **Index:** sub index of the entry, ranging from 0 to 99 within a track. Changing the index is possible by pressing the "+" or "-" keys on the numerical keyboard. Please note that changing an index affects the other indexes too and in some cases it is not possible at all. Also note that before you can do this you have to unlock the table by deselecting the checkbox at the bottom of the screen. Indexes can be added too by pressing the Insert key.
- **Offset:** number of frames between the index point and the actual start of the track. Some CD players, especially older models, have a delay when jumping from one track to another. This can cause problems when there is not enough space between the index point and the actual audio. In severe cases the start of the audio can be chopped off. To avoid this problem the DDP Creator has the possibility to add an offset before an index. The recommended offset is minimal 5 frames and the default is 10. You can change the default offset in the Tools | Settings menu.
- **Start:** absolute position of the index entry
- **Duration:** length of the index entry in frames. Note that the length of the offset is not included! You can change the length of a pause entry (index 0) by clicking on this field in the workspace after unlocking the table. The length can be entered in frames (like 150 frames for a 2 seconds pause) or in M:S:F format (for example 00:02:00).
- **File Name:** file that holds the audio of the index entry. This can be a wav, aif(c), flac, bin or DDP image file. If the file name for an index entry is empty, then there will be no audio in this entry, and it will be treated as a pause. The other way around is also true: all index entries, including 0, can contain audio if the file holds data for it.
- **Title, Performer, Songwriter, Composer, Arranger and Message:** Alphanumeric information. This information is used for CD Text only and can be edited by double clicking on these fields in the workspace or by clicking F2 after these fields are selected with the mouse. These fields can only be altered on an index 1 entry. The maximum number of characters is 160. All alphanumeric characters are allowed. If you enter performer data on track 1, the program asks if you want to apply the same performer text for the other tracks. Double clicking the title field will insert the filename of the track initially.
- **ISRC:** ISRC code of the track. The ISRC codes can be changed by clicking on the appropriate field. Adding an ISRC code is only allowed on the first index of a track. For the proper format please look [here](#). If you enter ISRC data on track 1, the program asks if you want to apply incrementing ISRC codes for the other tracks.
- **Gain (Pro version):** The gain in dB applied to this index. After unlocking the table you can adjust the gain by dragging the slider.
- **Loudness (Pro version):** Loudness of this index in LUFS. Only visible after the function Measure Loudness or Normalize Loudness in the Tools menu was executed.

You can adjust the columns by dragging the headers, or the separators between headers. You can also hide/display columns by right clicking on a header and select or deselect the desired column.

Edit Disc Data

The CD Text information for the disc can be viewed and changed by clicking on the “Edit CD Text” button.

Edit Project Data

The project information can be viewed and changed by clicking on the “Edit Project” button. This information will appear on a PQ sheet when generated. The information can be saved as program default.

Deleting track

Tracks can be deleted by selecting an index of a track in the workspace and clicking on the Delete Track button or pressing the Delete key.

Deleting indexes

Indexes can be deleted by selecting the index in the workspace and clicking on the Delete Index button or pressing the Backspace key.

Playback tracks

To play back a track, select an index in the workspace and press the “Play” button or press the Space key. Pressing the button or Space key again pauses the playback. Playback will stop when the user presses the pause button or at the end of the project.

It is possible to navigate during playback by clicking on the left and right arrow buttons. Holding them will fast forward or rewind. The playback slider displays the relative track position and can be adjusted to go to any position quickly.

Playing a transition between two tracks

You can audition the transition between two tracks by pressing the “Play Transition” button. Pressing the button again or the Space key pauses the playback. You will hear the end of the last index of the current track played into the first index of the next track and if a pre-gap exists it will be played in between. The pre-roll time can be set in the Settings menu.

Waveform Display

The waveform display shows the amplitude of the audio. You can zoom in and out by using the mousewheel while the mouse pointer is over the display. A cursor will follow the current play position. Left clicking on the display will change the cursor to that position. Right clicking while the table is locked, will start or stop playback.

Adding or deleting track and index markers

Right clicking in the waveform display while the table is unlocked will show a menu for adding an index or track marker at the current position. If the mouse cursor is over an existing marker, the menu will show the option to delete this marker.

Moving track and index markers

A marker can be moved to another position by dragging it with the mouse. The table must be unlocked.

File Menu

New

Discards the current project and starts a new one. If the current project is altered since the last save, you will be prompted.

Open

Opens a previous saved project. During loading the program checks the existence of each individual audio file. If it can't find a file, you will be prompted to point to it. After you acknowledged, the program will look for the other files in that same folder too.

Open recent file

Selects a previous opened file.

Save

Saves the current project.

Save As

Saves the current project as a different file.

Save PQ Sheet as PDF

Saves a PQ sheet from the current project to a pdf file. It is recommended to send this sheet with the DDP files to the duplication plant for reference. Before the command is started, the project is tested against the RedBook rules.

Exit

Exits the program.

Import

DDP Image

Loadback (import) of a DDP 2.00 fileset, regardless of the image data is stored in one file or more. CD Text data is imported if it exists. After the import, the project window shows the current DDP image as a regular project. You are prompted for a folder holding the DDP image

This function enables you to import a DDP images made by any application to verify PQ points, CD text, ISRC, MCN and other data. You can playback the audio and burn a RedBook compatible CD with or without CD Text. The project can be further changed and files can be added if needed. It is also possible to change the track order. The project can be exported again to DDP, CUE Sheet or CD.

File(s)

You can add audio files by selecting this function or by dragging wav, aif(c) or flac files or m3u files to the workspace. Before the files are added they are screened for compatibility. If a file does not meet the standard CD criteria (16 bit / 44.1KHz, stereo) then an error message will appear. The Pro version will accept 24 and 32 bit files. Note that the DDP Creator does not change the audio in any way, like resampling or changing the bit depth. However, the Pro version has an option to change the gain. Depending on the default pause setting in the Tools|Settings form, a pause or pre-gap will be added before each track. Setting this default value to zero disables this function.

If the Pro option is installed, adding an .iso file is also possible. Doing so will add the file as a data session to the project. It will appear as the last track and have a green background color. The .iso file can be any regular ISO 9660 or hybrid HFS file. It is possible to create an .iso file with the [Create ISO file](#) function.

CUE Sheet

Import of the widely supported CUE Sheet (cue) file. Only wav and aif and binary image files are supported. All indexes and CD Text entries are preserved. You are prompted for a .cue file.

This function ensures compatibility with other software that can export CUE Sheet files.

Pmi Image

Import of a Pyramix .pmi CD image. All indexes and CD Text entries are preserved.

Cda Image

Import of a CD Architect .cda CD image. All indexes and CD Text entries are preserved.

Audio CD

Import of an audio or Enhanced CD by ripping its content. All indexes and CD Text entries are preserved.

Export

DDP Image

Exports the current project to a DDP 2.00 fileset, including CD Text if selected. You are prompted to enter a folder and a name for the image. The files will be stored in a folder with the name you entered in the folder you selected. A MD5 checksum file is also created, along with a Windows or Mac executable to allow for quick checking.

Please make sure that you send all files to the disc replicator.

File(s)

Export the tracks to separate audio files and data (.iso) file in case of an Enhanced CD project (Pro version). The audio can be exported to .wav, .aif or .flac files. The Pro version can export to .mp3 or .m4a (AAC) too and the files will be tagged with the data taken from CD text (.flac, .mp3 and .m4a).

CUE Sheet

Export the current project to CUE Sheet (.cue) file. All indexes and CD Text entries are preserved. You will be prompted to enter a filename for the .cue file and .wav file.

This function ensures compatibility with other software that can import CUE Sheet files.

Audio CD

Burn a RedBook compatible CD from the current project. All indexes and CD Text entries are preserved.

Tools

Check Project

The current project is tested against a number of RedBook rules. The following criteria are used:

- MCN code must have the proper [format](#)
- First pre-gap must have a duration greater than 2 seconds
- Maximum length is 80 minutes
- Maximum number of tracks is 99
- Every track must have an index point 1
- The maximum number of index points for a track is 99
- Every track must have a duration greater than 4 seconds
- CD Text data on an index point other than 1 is not allowed
- Index points with a length of 0 seconds are not allowed
- ISRC codes must have the proper [format](#)
- ISRC code is only valid on the first index entry for each track

This test is automatically started before all export functions and PQ Sheet printing. If any of these criteria is not met an error is shown. Non critical errors can be ignored.

Check MD5

Prompts to open a checksum file (with extension md5) and tests whether the checksums of the files found in this file matches with the actual checksums of these files. This function allows you to check the integrity of a DDP fileset after downloading or reading them from disc.

Load CD Text

Loads a binary CD Text file and maps this data on the current project.

Load CD Text

Save a binary CD Text file created from the current project.

Burn Folder to Data CD/DVD

Instead of burning an audio CD it is also possible to burn a data CD or DVD. This can be handy when sending images to replicators that don't have a FTP server.

Upload Folder

With this function you can upload the contents of a folder, like a DDP image, to your duplication plant. The DDP image should be present before you invoke the transfer. You will be asked to select a folder that contains the DDP image. Please note that ALL files in this directory will be uploaded, including sub folders.

After an interruption the upload will resume automatically.

You will be asked if you want the uploaded data to be verified after uploading. If you select yes then the data

will be downloaded and compared with the original data. This will ensure a perfect upload.

The FTP settings can be set in the Settings dialog in the Tools menu.

Create ISO file (Pro version)

Creates an .iso file from a folder. The .iso file can be added to the project as data session with the [Add Track](#) function. The created .iso file is a standard ISO 9660 file.

Extract ISO file (Pro version)

Extracts the contents of an .iso file to a folder.

Measure Loudness (Pro version)

The loudness of each index is measured with the ITU-R BS.1770-2 / EBU R128 algorithm. After the measurement is completed the loudness (in LUFS) for each index can be found in the Loudness column on the main workspace table.

Loudness Normalization (Pro version)

The loudness of each index is measured with the ITU-R BS.1770-2 / EBU R128 algorithm. After the measurement is completed the loudness (in LUFS) for each index can be found in the Loudness column on the main workspace table.

After the measurement is completed the lowest found value is presented. In the following dialog window a target value can be selected, with the afore mentioned lowest found value as the high limit. In practice this means that all tracks can be normalized using the loudness of the quietest track and will be attenuated with the gain setting. The resulting loudness is the found loudness + the gain. The EBU R128 recommends a target loudness of -23 LUFS.

Settings

In this dialog you can set the program settings. These settings are not saved with a project but will be saved as program settings.

- Pre-roll time: this setting is used during the playback of a transition between two tracks and defines how much time at the end of the first track will be played before the transition and how much time of the second track will be played into. Enter a value between 5 and 20 seconds.
- Index offset: this defines the number of frames that are added between the first index and the actual audio of a newly added track. For more information please see the explanation of the offset in the [workspace](#). Enter a number between 0 and 20.
- Default Pause: this defines the length of a pre-gap in frames that is automatically added when a track is added. If this setting is 0 then no pre-gap is added. For more information please see the explanation of [Adding tracks](#) to the workspace. Enter a number between 0 and 300.
- Image creation: selects whether the DDP image will be a single file or split files for each track.
- Time display: selects whether the main time display shows the track time or the disc time.
- MD5 checker to include with DDP image: selects executable to be included with the DDP image.
- ISRC auto increment value: this value will be used as increment value when auto incrementing the ISRC values is selected.
- Dither type (Pro version): the type of dither that will be used when exporting tracks with a gain other than zero or tracks that have a bitdepth other than 16 bit. The dither type can be set to "Off", TPDF and HP TPDF. When set to "Off", you can still apply noiseshaping. The difference between TPDF and HP TPDF is that in the latter case the noise is shifted a bit to the higher frequencies, above about 2KHz. When TPDF is used without noiseshaping, the result is flat TPDF.
- Noiseshaping (Pro version): can be set to "Off", curve 1, 2 or 3. The difference between the curves is subjective and should be set by taste. Some technical specifications:
 - curve A: 5th order noiseshaping filter following an improved E-weighted response.
 - curve B: 9th order noiseshaping filter following an improved E-weighted response.
 - curve C: 9th order noiseshaping filter following an F-weighted response
- Playback bitdepth (Pro version): can be set to "Off", 16 bit or 20 bit.
- Hostname: the hostname of the remote FTP server. This setting is used in the "Transfer DDP with FTP" function in the Tools menu.
- Port: the port number of the remote FTP server. This setting is used in the "Transfer DDP with FTP" function in the Tools menu. The default setting is port 21.
- Username: the username of your account at the remote FTP server. This setting is used in the "Transfer DDP with FTP" function in the Tools menu.
- Password: the password of your account at the remote FTP server. This setting is used in the "Transfer DDP with FTP" function in the Tools menu.
- Initial directory: the upload directory at the remote FTP server. This setting is used in the "Transfer DDP with FTP" function in the Tools menu. If the directory does not exist it will be created if possible.
- Audio settings: in this dialog you can select the output playback device and settings.
- Encoder bitrate (Pro version): the bitrate when exporting to MP3 or AAC: 128, 192 or 256 kbps.
- Encoder bitrate mode (Pro version): the bitrate when exporting to MP3 or AAC: VBR or CBR. CBR only works with MP3.
- Encoder stereo mode (Pro version): the bitrate when exporting to MP3 or AAC: LR, MS or Joint stereo.

Help

Help

Shows this helpfile.

About

Shows an about box with information about the program.

Activate license

This allows you to activate a purchased license when running a trial version. You need to restart the program to load the license file.

Key Commands

Ctrl+N	New Project	Show DDP Creator Help
Ctrl+O	Open Project	Open a new project
Ctrl+S	Save project	Save current project
Ctrl+P	Save PQ Sheet	Save a PQ sheet to a pdf file
F1	Help	Displays the DDP Creator help file
Space	Play Track	Play the selected track
Num +	Increment Index	Increment the selected index entry
Num -	Decrement Index	Decrement the selected index entry
Left	Back	Skip back
Right	Forward	Skip forward
Backspace	Delete Index	Delete the selected index entry