The ConvertWithMoss Manual

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Contents

1 Welcome to the ConvertWithMoss Documentation

This tool converts multisamples in a specific source format to a different destination format. Furthermore, it can create multisample files from plain AIFF and WAV files.

Additionally, the conversion process reads and writes metadata (name, category, creator, description and keywords) as well as envelopes and filter settings, if supported by the format. If the source format does not support metadata a guessing algorithm is applied based on the samples names.

Details about the specific converted parameters can be found in a spreadsheet.

1.1 Installation

Download and run the matching installer for your operating system. After that you can start the application ConvertWithMoss.

> **Note macOS**
>
> Read the macOS installation specifics for important notices!

1.2 Build from sources

Ensure to have the required `JVM`, `JRE`, `JavaFX` and `Maven` dependencies preinstalled and set the `JAVA_HOME` environment variable to specify which Java version to use; the minimum required version is `21`. Then use `mvn install` command to start the build.

See also the various build scripts in this directory as references on how to build the documentation and/or the application source files.

For Linux (BSD not tested) there is also a `Makefile` for build and install with the usual `make` and `make install` commands.

1.3 Usage

1. Select the source format on the left. Select a source folder, which contains one or multiple folders with multisamples in the selected source format. The files can also be located in sub-folders.
2. Select the destination format. Select the output folder where you want to create the multisamples. This folder must be empty. You can add a non-existing folder to the name, which then is automatically created. E.g. you could select the Desktop and then add a folder *Conversions*.
3. Press the *Convert* button to start the conversion. The progress is shown with notification messages in the log area, which you should check for potential errors like defect source files, skipped folder, etc.

Alternatively, press *Analyse* to execute the same process as *Convert* but does not write any files. Use this to check for errors before finally running the conversion.

1.3.1 Options

- **Renaming**: Allows to rename multi-samples. Enable the checkbox to use this feature. If enabled select the file which contains the mapped names. The file is a simple text file in UTF-8 format (important if non-ASCII characters are used!). Each row contains one mapping. A mapping consists of 2 names separated either by ';' or ','. E.g. a row which contains "AcPno;Acoustic Piano" would name a multi-sample with the name "AcPno" into "Acoustic Piano" as output.
- **Create folder structure**: If enabled, sub-folders from the source folder are created as well in the output folder. For example, if I select my whole "Sounds" folder, there are sub-folders like `Sounds\07 Synth\Lead\01W Emerson'70 Samples`. In that case the output folder would contain e.g. `07 Synth\Lead\01W Emerson'70.multisample` if Bitwig multisample is selected as the destination format.
- **Add new files**: Starts the conversion even if the output folder is not empty but only adds files which are not already present.

- **Dark Mode**: Toggles the user interface between a light and dark layout.

2 macOS

2.1 Mojave and later

Mojave prevents software to be run which is not authorized by Apple. But instead of telling you so, you get an error that the files are corrupted (so, your OS is lying to you now. . .).

To fix it open the Terminal app and enter the application folder:

```
cd /Applications/ConvertWithMoss.app
```

Then remove the evil flag (Requires your administrator password):

```
sudo xattr -rc .
```

Since this seems not to work for everybody, there is another solution:

Temporarily, disable the Gatekeeper with

```
sudo spctl --master-disable
```

Open the application (should work now). Close it and enable Gatekeeper again to feel safe. . .

```
sudo spctl --master-enable
```

The application should now run also with Gatekeeper enabled.

2.2 macOS 13 Ventura

It got worse on macOS 13 and you need to take another step:

- after you did the xattr thing run it again and click away the error.
- now open the system settings and go to *Privacy & Security Settings*.
- at the very end there should now be a message saying something like 'publisher of ConvertWithMoss could not identified'.
- Click on the allow anyway button
- when you start ConvertWithMoss again you need to click away another 1000 dialogs but then it works.

Finally, have fun.

3 Supported Formats

The following multisample formats are supported:

- AIFF
- Ableton Sampler
- Akai MPC Keygroups / Drum
- CWITEC TX16Wx
- DecentSampler
- Kontakt NKI/NKM
- Expert Sleepers disting EX
- Korg KMP/KSF
- Korg wavestate/modwave
- Logic EXS24
- Multisample Format (Bitwig Studio, Presonus Studio One)
- Propellerhead Reason NN-XT
- SFZ
- SoundFont 2

- TAL Sampler
- WAV files
- Yamaha YSFC

3.1 Automatic Metadata detection

If a source format does not support metadata like author, category or additional tags, ConvertWithMoss can detect from the name and path of the file. The following settings can be used to tweak the detection process.

3.2 WAV Chunk Information

If the format uses WAV files to store the samples, there are the following options to additionally write metadata information to the respective chunks:

- Broadcast Audio Metadata: This can contain a description text, the creator of the sample and the creation date and time.
- Instrument: Contains the root note, fine tuning, gain, the key range ans the velocity range.
- Sample: Contains the root note, fine tuning and loop points.
- Remove JUNK, junk, FLLR and MD5 chunks: Enable this option to drop these chunks. Junk and filler chunks are only for aligning the following chunks to certain data positions. The MD5 chunk contains a checksum which is currently not updated and therefore should be dropped.

3.2.1 Metadata Detection Options

- Prefer folder name: If enabled the name of the multisample will be extracted from the folder instead of the sample names.
- Default creator: The name which is set as the creator of the multisamples, if no creator tag could be found.
- Creator tag(s): Here you can set a number of creator names, which need to be separated by comma. You can also use this to look up other things. For example, I set the names of the synthesizers which I sampled. My string looks like: “01W,FM8,Pro-53,Virus B,XV” (without the quotes).

3.3 1010music blackbox, tangerine, bitbox

This format is simply called a *preset*. A preset contains 16 slots and each slot can either contain a simple sample or a complex multi-sample. All presets need to be placed in the *Presets* folder on the SD-card. The main information of a preset is stored in a file which is always called *preset.xml*. This file is located in a folder with the name of the preset (eg. /Presets/MyLovelyPiano/preset.xml).

The related samples can be anywhere on the SD-card, if referenced accordingly in the preset.xml file. But to make the handling easier, the output of this tool puts all sample files in the same folder as the preset.xml file. Therefore, only one folder needs to be copied to the Presets folder on the SD-card.

There are the same options as with WAV files to write the different chunk information. It is suggested to leave them all enabled.

If the format is selected as the source, there are two things to consider:

- One or multiple slots contain a multi-sample: for each of the multi-samples a file in the destination format is created.
- All slots contain only single samples: one file in the destination format is created which combines all 16 slots. The notes are from 36 upwards if not configured differently in the preset.

There are no metadata fields (category, creator, etc.) specified in the format. Therefore, information is stored and retrieved from Broadcast Audio Extension chunks in the WAV files. If noch such chunks are present an automatic detection is applied.

3.3.1 Destination Options

- Option to set the *Interpolation Quality*. Setting it to *High* requires a bit more processing power on the 1010music devices.
- Option to trim sample to range of zone start to end. Since the format does not support a sample start attribute for multi-sample, this fixes the issue.
- Options to write/update WAV Chunk Information

3.4 AIFF

The Audio Interchange File Format (Audio IFF) provides a standard for storing sampled sounds. The format is quite flexible, allowing for the storage of monaural or multichannel sampled sounds at a variety of sample rates and sample widths. Audio IFF conforms to the "EA IFF 85" Standard for Interchange Format Files developed by Electronic Arts.

If AIFF is selected as the source format, all AIFF files located in the same folder are considered as a part of one multisample. You can also select a top folder. If you do so, all sub-folders are checked for potential multisample folders.

The applied algorithm and configuration options are the same as when WAV files are used as the source. See the WAV section for details.

3.5 Ableton Sampler

Ableton uses a generic preset format (*.adv) for all of their devices. For combined rack presets another format (*.adg) is used. All their formats are XML documents which are compressed with the open GZIP algorithm.

ConvertWithMoss can extract Sampler and Simpler presets from ADV files as well as all instances of Sampler or Simpler in ADG files when selected as a source. The presets from the Ableton libraries cannot be extracted since their AIFF files use a proprietary encryption algorithm. It writes ADV files as the destination.

ADV files and their samples need to be placed in the Ableton user library in the correct folders to allow Ableton to open it. Therefore, ConvertWithMoss creates the necessary folder structure which can be simply copied to the user library. If the source has sub-folders the global option *Create folder structure* should be deactivated otherwise it can be quite tedious to collect all the results files with their additional Ableton sub-folder structure.

3.6 Akai MPC Keygroups / Drum

A MPC Keygroup or MPC Drum setup is stored in a folder. It contains a description file (.xpm) and the sample files (.WAV). Both keygroup and drum types are supported.

There are no metadata fields (category, creator, etc.) specified in the format. Therefore, information is stored and retrieved from Broadcast Audio Extension chunks in the WAV files. If noch such chunks are present an automatic detection is applied.

Other restrictions are:

- A round robin keygroup can only contain up to 4 layers (groups). An error is displayed in this case but the file is converted anyway.
- Only 128 keygroups are allowed. An error is displayed in this case but the file is written anyway but might not be loadable.

3.6.1 Destination Options

- Options to write/update WAV Chunk Information

3.7 CWITEC TX16Wx

TX16Wx is a free sampler plugin available for Windows and Macos. TX16Wx Professional is the commercial expansion of TX16Wx. It adds some advanced features like effects, signal routing or trigger switching. But the free version is already very powerful and covers all of the features that ConvertWithMoss supports.

The format uses a XML format and keeps the samples separate.

There are no metadata fields (category, creator, etc.) specified in the format. Therefore, information is stored and retrieved from Broadcast Audio Extension chunks in the WAV files. If noch such chunks are present an automatic detection is applied.

3.7.1 Destination Options

- Options to write/update WAV Chunk Information

3.8 DecentSampler

The Decent Sampler plugin is a free (but closed source) sample player plugin that allows you to play sample libraries in the DecentSampler format (files with extensions: dspreset and dslibrary). See https://www.decentsamples.com/product/decent-sampler-plugin/ The format specification is available here: https://www.decentsamples.com/wp-content/uploads/2020/06/format-documentation.html#the-sample-element

A preset file contains a single preset. A dspreset file contains only the description of the multisample. The related samples are normally kept in a separate folder. Only WAV files are supported. A dslibrary file contains several dspreset files incl. the samples compressed in ZIP format.

There are no metadata fields (category, creator, etc.) specified in the format. Therefore, information is stored and retrieved from Broadcast Audio Extension chunks in the WAV files. If noch such chunks are present an automatic detection is applied.

3.8.1 Destination Options

- Make monophonic: Restricts the sound to 1 note, use e.g. for lead sounds.
- Add envelope: Create 4 knobs to edit the amplitude envelope.
- Add filter: Adds a low pass filter and creates a cutoff and resonance knob for it.
- Add reverb: Adds a reverb effect and creates two parameter knobs for it.
- Options to write/update WAV Chunk Information

3.9 Kontakt NKI/NKM

Kontakt is a sampler from Native Instruments which uses a plethora of file formats which all are sadly proprietary and therefore no documentation is publicly available. Nevertheless, several people analyzed the format and by now sufficient information is available to provide the support as the source.

However, the format changed many times across the different Kontakt versions. So far, the following formats are known and supported as a source:

Kontakt Version
1
1.5
2 - 4.1.x
4.2.2+
5 - 7

A NKI file contains one instrument which is a multi-sample with many parameters. Currently, the usual

multi-sample parameters are supported incl. loops. Furthermore, metadata information, the amplitude, pitch and filter cutoff envelope, filter parameters as well as pitchbend. (Most) NCW encoded sample files can be read as well. A NKM file contains up to 64 instruments and is supported as well as a source.

Encrypted files are not supported.

If selected as a destination, a NKI file is written and all samples are placed in a sub-folder with the same name.

3.9.1 Destination Options

- Currently, only the Kontakt 1 format is supported which sadly does not contain any metadata information.
- Options to write/update WAV Chunk Information

3.10 Expert Sleepers disting EX

The disting EX is a multifunction Eurorack module which provides many different algorithms. On of them is the SD Multisample algorithm which is an eight voice polyphonic, three part multitimbral, sample playback instrument, playing WAV files from the MicroSD card. It can have up to 3 input CV/gate pairs, or can be played via MIDI or I2C. It supports both velocity switches and round robins per sample. The basic multi-sample setup is encoded in the file-names of the samples. Further information like the amplitude envelope are stored in a preset (*.dexpreset). The preset references only the name of the folder which contains the related samples. All samples in the folder considered to be belonging to the multi-sample.

3.10.1 Destination Options

- 'Re-sample to 16bit/44.1kHz': If enabled, samples will be resampled to 16bit and 44.1kHz. While the device can play higher resolutions as well it decrease the number of voices it can play.
- Option to trim sample to range of zone start to end. Since the format does not support a sample start attribute, this fixes the issue.
- Options to write/update WAV Chunk Information. Writing the Sample chunk is important since the disting EX reads the loop information from it.

3.11 Korg KMP/KSF

The KMP/KSF format (*.KMP) was first introduced in the Korg Trinity workstation (1995) and since then supported in many Korg workstations and entertainment keyboards up to the latest Korg Nautilus (2020). The following keyboards are known to support the format:

- Trinity
- Triton
- OASYS
- M3
- Kronos
- KROSS (only for pads)
- PA1X/PA800/PA2X/PA3X/PA4X
- Nautilus

The format is documented in detail in the appendix of the respective parameter guides. The KMP format contains only 1 group of a multisample, which means there are only key splits but no groups. The file references several KSF files which contain the sample data for each key region.

Since the KMP format can only contain 1 group of a multisample, sources with multiple groups are split into several destination KMP files. Due to limitations of the format only uncompressed 8 or 16 bit samples up to 48kHz are supported. Files in other formats are automatically converted.

There are no metadata fields (category, creator, etc.) specified in the format. Therefore, information is stored and retrieved from Broadcast Audio Extension chunks in the WAV files. If noch such chunks are present an automatic detection is applied.

3.12 Korg wavestate/modwave

The korgmultisample format is currently used by the Korg wavestate and modwave keyboards as well as their VST plugin siblings. Files in that format (*.korgmultisample) can be opened with the Korg Sample Builder software and transferred to the keyboard.

Since the format is pretty simple all data stored in the file is available for the conversion.

Since the format supports only one group of a multisample, multiple destination files are created for each group available in the source. If there is more than one group in the source the name of the created file has the velocity range of the group added. Using that information a multisample with up to 4 groups can be created as a Performance in the device.

3.12.1 Destination Options

- Options to write/update WAV Chunk Information

3.13 Logic EXS24

The Logic EXS24 format is a proprietary sample format used by Logic Pro, a digital audio workstation. It is primarily used for storing and playback of sampled instruments and sounds within Logic Pro. The format allows for comprehensive mapping and editing of samples, as well as providing various modulation and performance options.

The format only stores absolute paths to the sample files. Therefore, the easiest way to make the converter find the sample files is to place them in the same folder as the EXS file. If it cannot be found in this folder the sample file is searched recursively starting from a number of levels up from the source folder of the EXS. *The number of folders can be configured.*

There are no metadata fields (category, creator, etc.) specified in the format. Therefore, information is stored and retrieved from Broadcast Audio Extension chunks in the WAV files. If noch such chunks are present an automatic detection is applied.

3.13.1 Destination Options

- Options to write/update WAV Chunk Information

3.14 Multisample Format (Bitwig Studio, Presonus Studio One)

This open format is currently supported by the stock sampler in Bitwig Studio and Presonus Studio One. A multisample file is a zip archive which contains all samples in WAV format and a metadata file in XML format. It supports multiple groups, key and velocity crossfades as well as several metadata information: creator, sound category and keywords.

The parser supports all information from the format except the group color and select parameters 1 to 3, which are not mappable.

This converter supports (split) stereo uncompressed and IEEE float 32 bit formats for the WAV files.

3.14.1 Destination Options

- Options to write/update WAV Chunk Information

3.15 Propellerhead Reason NN-XT

The Propellerhead Reason NN-XT is a software sampler that is included in the Reason software package. Reason is a digital audio workstation (DAW) software developed by Propellerhead Software. It allows users to load and play back sampled sounds, such as instruments or drum hits. The file ending is *sxt*.

There are metadata fields for creator and a creator URL. However, additional information like a category is retrieved from Broadcast Audio Extension chunks in the WAV files. If noch such chunks are present an automatic detection is applied.

3.16 SFZ

"The SFZ format is a file format to define how a collection of samples are arranged for performance. The goal behind the SFZ format is to provide a free, simple, minimalistic and expandable format to arrange, distribute and use audio samples with the highest possible quality and the highest possible performance flexibility" (cited from https://sfzformat.com/).

The SFZ file contains only the description of the multisample. The related samples are normally kept in a separate folder. The converter supports samples in WAV, OGG and FLAC format.

There are no metadata fields (category, creator, etc.) specified in the format. Therefore, information is stored and retrieved from Broadcast Audio Extension chunks in the WAV files. If noch such chunks are present an automatic detection is applied.

3.16.1 Destination Options

- Convert to FLAC format: If enabled, the sample files are converted to FLAC.
- Options to write/update WAV Chunk Information

3.17 SoundFont 2

The original SoundFont file format was developed in the early 1990s by E-mu Systems and Creative Labs. It was first used on the Sound Blaster AWE32 sound card for its General MIDI support.

A SoundFont can contain several presets grouped into banks. Presets refer to one or more instruments which are distributed over a keyboard by key and velocity ranges. The sample data contained in the file is in mono or split stereo with 16 or 24 bit.

The conversion process creates one destination file for each preset found in a SoundFont file. The mono files are combined into stereo files. If the left and right channel mono samples contain different loops, the loop of the left channel is used.

There are metadata fields for creator and some description specified in the format. However, additional information like a category is retrieved from Broadcast Audio Extension chunks in the WAV files. If noch such chunks are present an automatic detection is applied.

3.18 TAL Sampler

TAL-Sampler is an analog modeled synthesizer with a sampler engine as the sound source, including a modulation matrix and self-oscillating filters. Most of the presets in it's library store the sample files in an encrypted format (*.wavsmpl), this format is not supported. Only presets using plain WAV or AIFF files are supported.

Choosing TAL Sampler as the destination format, creates a *talsmpl* file and stores all samples in a sub-folder by the same name. The samples of the source groups are distributed across the 4 layers of TAL Sampler in such a way that the key and velocity splits do not overlap. This is a workaround for the fact that TAL Sampler does not support overlapping samples. Since groups have only the name and trigger type as attributes, which are not supported in TAL Sampler anyway, this should work in most cases. If there are still overlapping samples a warning is displayed.

There are no metadata fields (category, creator, etc.) specified in the format. Therefore, information is stored and retrieved from Broadcast Audio Extension chunks in the WAV files. If noch such chunks are present an automatic detection is applied.

3.18.1 Destination Options

- 'Re-sample to 16bit/44.1kHz': If enabled, samples will be resampled to 16bit and 44.1kHz. While the device can play higher resolutions as well it might impact the performance.
- Options to write/update WAV Chunk Information

3.19 WAV files

If WAV is selected as the source format, all WAV files located in the same folder are considered as a part of one multisample. You can also select a top folder. If you do so, all sub-folders are checked for potential multisample folders.

First, all WAV files of a folder are checked if they contain instrument chunks. If this is the case they are used to create the layout of the multi-sample (range and velocity splits as well as gain and pitch settings). If no such information is available a clever algorithm tries to detect the necessary key range and velocity information from the names of the WAV files. Furthermore, the algorithm tries to detect as much metadata as possible from the WAV files:

- Notes are first detected from the sample chunk. If none is present, different parser settings are applied on the file name to detect a note name (or MIDI note value).
- A category is extracted from the file name as well based on a list of several synonyms and abbreviations (e.g. Solo as a synonym for Lead). If this fails the same logic is applied to the folder names (e.g. you might have sorted your lead sounds in a folder called *Lead*).
- Characterizations like *hard* are extracted as well with a similar algorithm as for the category.

Metadata information is retrieved from Broadcast Audio Extension chunks in the WAV files. If noch such chunks are present an automatic detection is applied.

3.19.1 Groups

Detected groups will be equally distributed across the velocity range. E.g. if 2 groups are detected the first will be mapped to the velocity range of 0-63 and the second to 64-127.

- Detection pattern: Comma separated list of patterns to detect groups. The pattern must contain a star character ("*"), which indicates the position which contains the group number.
- Order of group numbering: Enable to map groups inversed. This means that the highest number will be mapped to the lowest velocity range.

3.19.2 Mono Splits

WAV file can contain different sample formats. This converter supports (split) stereo uncompressed and IEEE float 32 bit formats. Only WAV files in Mono or Stereo are supported. Stereo samples might be split up into 2 mono files (the left and right channel). This tool will combine them into a stereo file.

- Left channel detection pattern: Comma separated list of patterns to detect the left channel from the filename. E.g. "_L".

3.19.3 Source Options

- Crossfade notes: You can automatically create crossfades between the different note ranges. This makes especially sense if you only sampled a couple of notes. Set the number of notes, which should be cross-faded between two samples (0-127). If you set a too high number the crossfade is automatically limited to the maximum number of notes between the two neighboring samples.

- Crossfade velocities: You can automatically create crossfades between the different groups. This makes especially sense if you sampled several sample groups with different velocity values. Set the number of velocity steps (0-127), which should be crossfaded between two samples. If you set a too high number the crossfade is automatically limited to the maximum number of velocity steps between the two neighbouring samples.
- Post-fix text to remove: The algorithm automatically removes the note information to extract the name of the multisample but there might be further text at the end of the name, which you might want to remove. For example the multisamples I created with SampleRobot have a group information like "_ms0_0". You can set a comma separated list of such postfix texts in that field.

3.19.4 Destination Options

- Options to write/update WAV Chunk Information

3.20 Yamaha YSFC

This format is used in most of the Yamaha Workstation. While the format is the same, the content is different. Currently, the formats of the Montage (not Montage M) and MODX/MODX+ are support both as source and destination format. That covers files with the endings X7L, X7U, X8L and X8U. As the source the backup formats X7A and X8A are supported as well.

Furthermore, the formats of older models are suppored for reading only:

- X0A, X0W: Motif XS
- X3A, X3W: Motif XF
- X6A, X6W: MOXF

The wave files in professional Yamaha libraries often are compressed. Such files are not supported. Furthermore, only self-contained libraries (= libraries which do not reference samples in other libraries) are supported.

So far, only the basic multi-sample data is converted (which means that no performances are created and therefore no information about e.g. filter, envelope or effects is converted).

Note: There are no checks that the created libraries stay in the bounds of the workstation (number of maximum samples or required memory size)!

3.20.1 Destination Options

- Library Format: Chooses the output format which is created.
- Combine all source multi-samples into one library: If this option is off, each source multi-sample is stored in a separate library which the name of the multi-sample. If this option is enabled, all source multi-samples are combined into 1 library.
- Library Filename: If the previous option is enabled to combine all source multi-samples into one library, this name is used as the filename.

4 Changes

4.1 11.1.0

- New: AIFF/WAV files are now lazy loaded which keeps the memory usage down.
- EXS24
  - New: Increased the directories upwards search option to 6.
- KMP
  - Fixed: Creation did crash.
- Sample Files
  - New: Aggregated AIFF and WAV sources into 'Sample Files' source. Added AIFF, FLAC, NCW and OGG files as well. All types can be selected and detected at once.

  - Fixed: Note detection from file names could be wrong when flat notes were part of it (e.g. Eb2 was detected as B2).
  - Fixed: Category detection on sample file names did not always work

4.2 11.0.0

- Added support for Yamaha YSFC format (read/write: Montage, MODX/MODX+, read: Motif XS, Motif XF, MOXF).
- Bitwig Writing
  - New: Support for RIFF chunk updates (fixes issues with certain MPC WAV files as source).

4.3 10.6.0

- All formats
  - New: If multi-samples with the same name are created during a conversion process, unique postfixes are now appended.
  - Fixed: Average bytes per second was not stored correctly in WAV files.
- Kontakt - Reading
  - New: Support for NCW files with 32-bit float samples.

4.4 10.5.0

- Several accessibility improvements and fixes:
  - Button mnemonics were partially broken.
  - Improved order of tabulator traversal.
  - Added more tooltip info
  - Set default button states, can be execute by pressing *Return*.
- Fixed: Switching off dark mode required a restart.
- All formats
  - Fixed: Fixed a crash when envelope was not set.
- AIFF/WAV
  - Fixed: Velocity layer information was removed from file names which lead to duplicate filenames.
- Reason NN-XT
  - Fixed: Reading/Writing negative tunings was broken.

4.5 10.2.0

- Kontakt 1-4, MPC Keygroups, Soundfont 2, TAL Sampler, TX16Wx
  - New: Added support for amplitude and filter velocity modulation.
- Kontakt - Writing
  - New: Improved pitch envelope.
- Kontakt 4.2-7 - Reading
  - Fixed: Group volume, panorama and key-tracking was not applied.
- EXS, SXT, TX16Wx - Reading
  - New: Speed up finding samples.
  - Fixed: If levels to search upwards was set to 0, it did not search downwards.
- WAV
  - Fixed: Reading/writing the pitch fraction field of the sample chunk was not always correct.

4.6 10.1.0

- All formats
  - Fixed: Increased the heap memory to 64GB to support larger source files.
  - Fixed: WAV files in 32-bit float can now be converted to 16-bit PCM (workaround for bug in Java AudioSystem).

- 1010music format - Writing
  - New: Added an option to trim samples with a delayed start.
- disting EX - Writing
  - New: Added an option to trim samples with a delayed start.
  - Fixed: The MIDI note for the switch (SW) was off by 1 octave (disting assumes C3 as MIDI note 48 instead of 60). This caused playback issues.
  - Fixed: Release trigger groups are now removed from the output since the distingEX does not support release triggers.
- SFZ
  - Fixed: Pitch bend was by factor 100 too small (semi-tones instead of cents).

4.7 10.0.0

- Added support for disting EX multi-sample preset format.
- All formats
  - New: Added support for amplitude and filter velocity modulation (1010music, Ableton ADV, SFZ). Only amplitude: DecentSampler, EXS24.
  - Fixed: Improved handling of missing root note information.
- 1010music format - Reading
  - Fixed: Samples could not always be found.
- EXS - Writing
  - Fixed: Filter cutoff was calculated incorrectly and could lead to silent patches.
  - Fixed: Envelope parts which were not set were handled incorrectly.
- SFZ - Reading
  - Fixed: Attributes of previous converted SFZ did leak into next conversion.
  - Fixed: Only create a filter when there is at least a cutoff or filter type attribute present.

4.8 9.5.0

- Added support to write Soundfont 2.
- All formats
  - Fixed: In rare cases key-ranges could be stored incorrectly if not fully present in the source file
- 1010music format - Writing
  - New: Set samtrigtype to zero if one-shot.
  - Fixed: Writing sample start, length and reverse were missing.
- DecentSampler - Read
  - Fixed: The sub-folder which contains the library/preset was added to the name which could cause issues in the destination format.
- Sf2 - Reading
  - Fixed: Pitch envelope was only set when a filter was present as well.
- TX16Wx - Read
  - Fixed: samples could sometimes not be found on Macos/Linux
- WAV - Read
  - New: Metadata is now read from info sub-chunks and stored in the Comment metadata field.
- WAV - Write
  - Fixed: Update of Broadcast Audio chunk did fail if no date/time metadata was set.
  - Fixed: Destination file name could be empty if 'prefer folder name' was selected.

4.9 9.0.1

- Ableton - Read/Write
  - Fixed: The template contained and error and resulting ADV files could not be loaded in Ableton.
  - Fixed: Names from ADG files were not unique.

4.10 9.0.0

- New: Added support for Ableton ADV (read/write) and ADG (only read) files.
- New: Added support for creating multi-samples from AIFF files and the contained metadata.
- New: Envelope improvements
  - SFZ: Added attack, decay and release slope attributes to amplitude, filter and pitch envelopes.
- DecentSampler - Read
  - New: Read/write amplitude attackCurve, decayCurve and releaseCurve attributes.
  - Fixed: When processing a dslibrary file the name of the library file was always used as the destination preset name instead of the dspreset name. Therefore, only one preset from the library was created.
- Kontakt 1-2 - Read/Write
  - New: Added attack curve to amplitude, filter and pitch envelopes.
- MPC Keygroups - Read/Write
  - New: Added attack, decay and release slope attributes to amplitude, filter and pitch envelopes.
- TX16Wx Read/Write
  - New: Added attack, decay and release slope attributes to amplitude, filter and pitch envelopes. Added all envelope levels.
- WAV - Read
  - New: If the name ends with a dash it is removed.
  - Fixed: Samples could have doubled file endings (.wav.wav).
  - Fixed: If Instrument chunks were present in the files, the conversion did not work (there was an error shown that the MIDI note could not be detected which was misleading as well).

4.11 8.5.1

- Kontakt - Reading
  - Fixed: In Kontakt 4.2 to 7 the loop data was not read correctly. This could create loops of length 0 for One-Shots.
- Multisample - Write
  - Fixed: Bitwig could not process the ZIP compressed samples due to an added info field. Additional info is removed again.

4.12 8.5.0

- Added support for reading and writing CWITEC TX16Wx (*.txprog) files.
- Added support for reading and writing Propellerhead Reason NN-XT (*.sxt) files.
- All formats
  - New: Added chunk update settings to all output formats that reference WAV files.
  - Fixed: Fixed some issues with conversion of filter and pitch envelope modulation depth.
- Decent Sampler
  - New: Minimum version is now set to “1.11”.
  - New: Added support for new filter types: lowpass, lowpass_1pl, bandpass, highpass, peak and notch.
  - New: Added filter envelope.
  - New: Added support for panorama.
  - New: Removed all knobs except reverb settings to be able to set these parameters on the samples level.
- Kontakt - Reading
  - New: Use category detection when category is set to ‘New’.
- SFZ - Writing
  - Fixed: The length of the loop crossfade was calculated incorrectly.
- MPC - Writing
  - New: Set filter on groups from 1st zone of the group instead of the 1st zone of the 1st group.

4.13 8.0.0

- Added support for reading and writing Logic EXS24 files.
- Fixed: Font color of logger in light mode was wrong.
- NKI - Read
  - Fixed: A proper error message will be output if a sample file is missing.

4.14 7.5.0

- All formats
  - New: Implemented workaround to accept AIFF files with an ending of 'aiff' (instead of only 'aif').
- 1010music format - Writing
  - New: Added option to convert samples to 24bit/48 kHz which saves a bit on processor power on the 1010music devices.
- Korg KMP - Writing
  - Fixed: Loop points were not correct when the source sample was not 44.1kHz.
- SFZ - Reading
  - New: Added support for SFZ files which use sample files in OGG or FLAC format.
- SFZ - Writing
  - New: Added option to create FLAC samples.
  - New: Added options to write instrument, sample and broadcast audio chunks.
- TAL Sampler - Reading
  - Fixed: Metadata configuration widgets were missing.

4.15 7.4.0

- Added support for 1010music format (blackbox, tangerine, bitbox).
- All formats
  - New: Support for creation date/time in formats which support it.
  - New: Unsupported WAV file metadata chunks are kept when read/written.
  - New: Samples in ZIP files get the modification date of the multi-sample source.
  - New: Added 'Hammond' as organ synomym and 'Ambient' and 'Atmo' as pad synonyms in category detector.
  - Fixed: Tab labels were not visible on Linux.
- WAV - Reading
  - New: Reads metadata (originator, description, creation date/time) from the broadcast audio chunk (if present) of the 1st WAV file.
- WAV - Writing
  - New: Added options to write instrument, sample and broadcast audio chunks.
  - Fixed: WAV file chunks were not aligned to multiples of 2.
- SFZ, DecentSampler, MPC Keygroup, TAL Sampler - Reading
  - New: Reads metadata (originator, description, creation date/time) from the broadcast audio chunk (if present) of the 1st WAV file.
- SFZ, DecentSampler, MPC Keygroup, TAL Sampler - Writing
  - New: Writes metadata (originator, description, creation date/time) to the broadcast audio chunk of all WAV files.
- MPC - Writing
  - Fixed: The sample chunk of a MPC destination WAV file was missing the number of loops value.

4.16 7.3.0

- Added support for TAL Sampler format (reading + writing).
- Improved user interface.
- Sf2 - Reading
  - Fixed: 24 and 16 bit detection were flipped and produces an exception.

- SFZ - Reading
  - New: AIFF files can be used as input.
- Kontakt - Reading
  - Fixed: Zone tuning was not set correctly.
  - Fixed: If a file was referenced more than once in a monolith, all of them had the same zone settings.
- Korg KMP - Reading
  - Fixed: Pitch tracking was inverted.

4.17 7.2.1

- DecentSampler - Writing
  - Fixed: Tuning was not set correctly
- Kontakt - Reading
  - New: Support for Kontakt 7.6.
  - Fixed: Kontakt 5-7: Sample zones from monolith files did miss all settings.
  - Fixed: Kontakt 5-7: Pitch was not handled correctly.

4.18 7.2.0

- Kontakt - Reading
  - New: Support for Kontakt 4.2 and 5-7 NKMs.
  - Improved: Detection of encryption.
  - Fixed: Improved Kontakt 5-7 file path reading and handling.

4.19 7.1.1

- Kontakt - Reading
  - Fixed: Regression from 7.1.0 - Kontakt 5-7 files could not be read at all.
  - Fixed: Kontakt 5-7 relative paths can contain redirections to parent directories which were not added.
  - Fixed: Support for Kontakt 2 files which contain an XML document with a leading UTF-BOM.

4.20 7.1.0

- Fixed: Loops could be incorrect if sample rate was not 44.1kHz and audio file metadata could be wrong as well in that case.
- Korg KMP/KSF
  - New: Convert source samples to support bit resolutions (8, 16) and maximum sample rate of 48kHz.
  - Fixed: Improved check for duplicated DOS file names and unique ones are now created.
- Kontakt - Reading
  - New: Kontakt 2-4 monoliths in big-endian encoding are now supported.
  - New: Added support for alternative Kontakt 1 file-ex sample path reference.
  - New: Added support for Kontakt 1.5 files.
  - Improved: Finding samples when absolute sample file paths are used.
  - Fixed: Fixed several issues with Kontakt 2-4 monoliths.
  - Fixed: NCW files with mid/side encoding were not handled correctly.

4.21 7.0.0

- '(Velocity) Layers' have been renamed to 'Groups' in the user interface.
- Fixed: Some issues with reading WAV files.
- MPC keygroups
  - Improved: Loop information is written to the WAV file which seems to be used by the MPC.
- Native Instruments NKI files - Reading

  - New: Conversion of Kontakt 4.2 - 7 files: metadata, zones, loops, NCW and monoliths files work but no support for envelopes and filters.
- Native Instruments NKI files - Writing
  - Fixed: Created Kontakt 1 files could be opened with Kontakt but not saved again due to the use of forward slashes for sample paths. Backward slashes are used now.
- Sf2 - Reading
  - New: Use filename (without ending) for instruments named 'NewInstr'.
  - Fixed: Panorama setting was not corrected when mono files were combined to stereo.
  - Fixed: If left and right sample had different lengths, the shorter sample had data from the following sample added.

4.22 6.3.0

- Default volume envelopes are applied based on the detected category if none is present.
- Decent Sampler
  - Fixed: Read: Wrong velocity range (0-0) when velocity settings were missing.
- MPC keygroups
  - Fixed: Read/Write: Improved mapping of envelopes.
  - Fixed: Write: Pitch was not correct.
- SFZ
  - Fixed: Increased allowed range of pitch values.
  - Fixed: Panorama was not read / written.

4.23 6.2.1

- Decent Sampler - Reading
  - New: Implemented workaround for invalid XML document (contains comments before XML header).
  - New: Added support for notes which are formatted as text instead of MIDI numbers.
  - Fixed: Groups were not detected.

4.24 6.2.0

- Added support for reading Native Instruments NKM files (Kontakt Multis) in Kontakt version 1-4.
- Native Instruments NKI files - Reading
  - For Kontakt 5+ NKI files the exact version number is displayed (but reading is still not supported).
- Native Instruments NKI files - Writing
  - New: Intensity of default envelopes is now set to 1 (was 0).
  - New: The default pitch envelope has now 0 for all parameters.
  - Fixed: Envelope hold and decay were flipped.

4.25 6.1.0

- Tabs are now ordered alphabetically.
- Bitwig Multisample
  - Fixed: If a loop was set to Off it was still applied.
- Native Instruments NKI files
  - New: Added support to write NKI files in Kontakt 1 format.
  - New: Added support for AIFF files (will be converted to WAV).
  - New: Added support for reading Kontakt NKI files stored in big-endian format. But could not test with any monolith file, therefore an error is shown.
  - New: Added support for pitch envelopes.
  - New: Added support for filter settings and cutoff envelope.
  - Fixed: High velocity crossover value did overwrite low velocity crossover.
- Korg KMP

  - Fixed: Extracting groups into single KMP files did overwrite the KSF sample files.

4.26 6.0.0

- New: Added option to rename multi-samples (thanks to Philip Stolz).
- New: Improved mapping of envelopes to MPC keygroups (thanks to Philip Stolz).
- New: Added support for reading Kontakt NKI files (only the format of the versions before Kontakt 4.2 are supported, thanks to Philip Stolz).
- Fixed: Added missing reading of panorama value.

4.27 5.2.1

- Fixed: Bitwig Multisample files with old layer formatting had duplicated layers as output.
- Fixed: Missing trigger types in Decent Sampler files did show an unnecessary error.

4.28 5.2

- New: Added support for trigger type (attack, release, first, legato) for SFZ, Decent Sampler, MPC Keygroups (only attack, release on instrument).

4.29 5.1

- New: WAV files are added as destination format e.g. in case you only want to extract WAV files from SF2 files.
- New: Store WAV ending in lower-case when converted from MPC Keygroups.
- Fixed: (Bitwig) Multisample files must not be compressed for faster access. Bitwig can also handle compressed files but other hosts supporting the format might fail. If you created Multisample files with this converter, simply run a new conversion on them with Multisample as source and destination to fix the issue.
- Fixed: Created (Bitwig) Multisample metadata file contained wrong group indices (off by 1).

4.30 5.0

- New: Added reading/writing of Korg KMP/KSF files.
- New: Added icons to the buttons.

4.31 4.7.1

- Fixed: Name detection was broken (if 'Prefer folder name' was off).
- Fixed: Akai XPM: Velocity range was not read correctly.

4.32 4.7

- New: WAV: Layer detection pattern fields are now checked to contain a '*'.
- Fixed: WAV: Having the layer detection pattern field empty led to undetectable MIDI notes.
- Fixed: WAV: The order of potential note names in file names could have been wrong and therefore a detection could fail.

4.33 4.6

- New: SF2, SFZ, MPC: Support for Pitch bend range settings.
- New: SF2, SFZ, Decent Sampler, MPC: Support for filter settings (incl. filter envelope).
- New: SF2, SFZ, MPC: Support for Pitch envelope settings.
- Fixed: SFZ: Logging of unsupported opcodes did add up.
- Fixed: SFZ: Sample paths in metadata now always use forward slash.

- Fixed: Decent Sampler: Sample files from dslibrary could not be written.
- Fixed: Decent Sampler: Tuning was not read correctly (off by factor 100).
- Fixed: Decent Sampler: Round-robin was not read and not written correctly.

4.34 4.5

- New: Support for amplitude envelope: Decent Sampler, MPC Keygroups, SFZ: read/write; SF2: read
- New: Decent Sampler: Support 'tuning' and 'groupTuning' on group tags as well as 'globalTuning' on the groups tag.
- New: SF2: Support initialAttenuation generator.
- Fixed: SF2: Sample files extracted from Sf2 were always set as 44.1kHz.
- Fixed: SFZ: Presets with illegal characters were corrected for the sample folder name but not in the SFZ file reference.
- Fixed: SFZ: Loop attributes were not read when loop_type was missing.
- Fixed: SFZ: Loop attribute alternative names loopstart, loopend were not read.
- Fixed: SFZ: Loop was not set to off when no loop was present.
- Fixed: MPC Keygroups: Loop end was not set correctly if different from sample end.
- Fixed: Decent Sampler: group name was wrongly reported as not supported.
- Fixed: WAV: Check of sample chunks when combining mono to stereo does now only require to have the same pitch.
- Fixed: Error message for left/right mono samples with different pitch was missing.

4.35 4.0

- New: Added reading/writing of Korg Wavestate (.korgmultisample) files.
- New: Added reading of Akai MPC Keygroup files.
- New: Added the WAV creator detector parameters to SFZ, Decent Sampler and MPC Keygroups as well.
- New: Added a dark mode.
- Fixed: WAV: Detection of root note from sample names could be wrong when multiple options apply and the last one was wrong.
- Fixed: SFZ: Ignore illegal characters in SFZ files.
- Fixed: Bitwig multisample: Key tune parameter was not stored correctly.

4.36 3.2

- New: Support WAV files in extensible format.
- New: SFZ: Create names for groups without a name.
- New: SFZ: Check for trigger opcode but only 'attack' is supported.
- Fixed: SFZ: Key values which did not use MIDI note numbers were not read (e.g. c#3).
- Fixed: Improved handling of large chunks in WAV files.
- Fixed: Fixed issues with sample paths created on different OS.
- Fixed: Fixed some issues with error message formatting.
- Fixed: Do not create the top source folder in the output folder (only the sub-folders).

4.37 3.1

- New: Akai MPC Keygroup - round-robin groups are now converted (up to 4).
- New: Akai MPC Keygroup - more than 4 groups can now be converted; this creates multiple keygroups.
- Fixed: Akai MPC Keygroup - root notes of samples were off by 1.

4.38 3.0

- New: Added writing of Akai MPC Keygroup files.

4.39 2.2.0

- New: DecentSampler creator got some options to choose which controls to create and to make the sound monophonic.
- Fixed: WAV detector: Upper group was not always 127.

4.40 2.1.1

- Fixed: WAV detector did not read loops from WAV files.

4.41 2.1

- Fixed: WAV detector did also deliver results for empty folders.
- Fixed: Setup for created DecentSampler Filter and Reverb is working now.

4.42 2.0

- New: Added reading and writing of DecentSampler preset and library files.
- New: Improved note detection from file names.
- Fixed: SFZ detector - global_label was not read.
- Fixed: SFZ parser - Comments at line end were not removed which conflicted with attribute values.
- Fixed: WAV detector - Crash if left and right mono sample had different lengths.
- Fixed: Creating folders for SFZ could raise an exception.
- Fixed: Source and destination tabs could be removed.