



Session Updater for rxdoc files

Introduction

Thank you for installing **Session Updater for rxdoc files**.

This tool was created to help fellow mastering engineers deal with the common situation where a client sends a new mix *after* you have painstakingly carried out de-essing, de-clicking and often large numbers of other edits on the original audio, all by hand. In many cases there is no practical alternative to starting again.

With Session Updater you can replace the original audio file in your rxdoc file with the new version of the audio, and automatically reconstruct the same edits to the new audio, all within the tool.

If the new mix is longer or shorter than the original version, Session Updater will try to automatically align based on an analysis of the old and new waveforms. Alternatively you can manually adjust the offset down to a single sample.

Individual edits can be toggled on and off, and you can preview everything before committing.

The result is always saved as a new file. Your original rxdoc file is never overwritten.

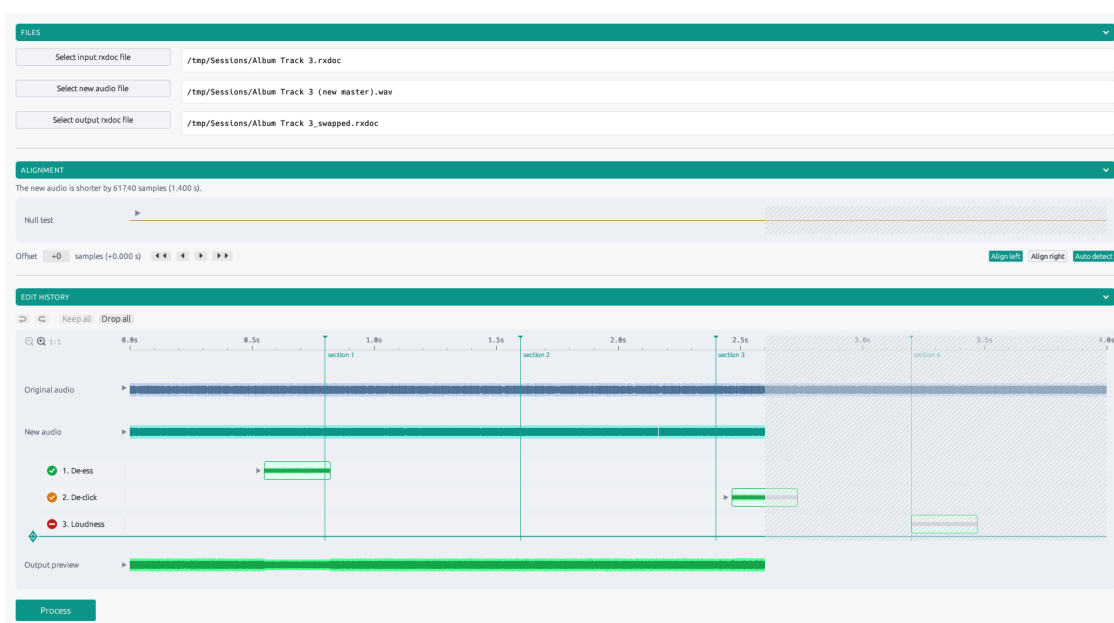
Activation

When Session Updater first starts you will be prompted to activate your license.

Paste the registered name and license key and click Activate, or click Cancel to continue in demo mode. In demo mode, features are fully functional except for the ability to save a new rxdoc file with your changes.

The user interface

The display is organised into three collapsible sections from top to bottom: **Files**, **Alignment** and **Edit History**, and a **Process** button at the bottom to generate a new rxdoc file (disabled in demo mode).



Start at the top and work your way down the page.

Files

The **Files** section is used to select the original rxdoc file to be updated and the new audio file that you want to use, and to choose where you want to save the new rxdoc file.

Session Updater supports most audio formats including **WAV**, **AIFF**, **FLAC**, **ALAC**, **CAF**, **MP3**, **AAC/M4A** and **Ogg**. The replacement file must have the same sample rate and the same number of channels as the original audio.

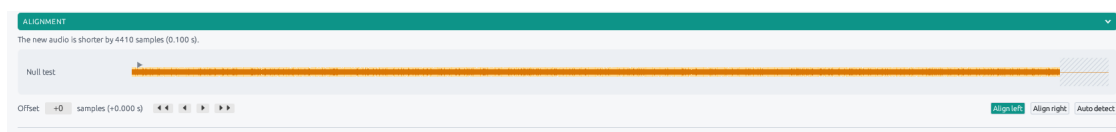
Alignment

The **Alignment** section helps make sure markers and edits remain positioned correctly on the timeline even if the new file is shorter or longer than the original.

If your new audio is exactly the same length as the original, you can skip this section.

When this happens it is not always obvious if space has been added or removed at the start, or the end, or both.

Session Updater tries to solve this by comparing the two waveforms and finding the offset position where they most closely match. If the new audio file is significantly different then this is less likely to be effective, but for small changes it usually does a great job.



At the top of the Alignment section is the 'Null test', showing the result of overlaying the *original* audio with a polarity-inverted version of the *new* audio. In this view, identical content cancels out and all that is left are the differences between the two tracks, visible as peaks in the null test display. If the null test is completely flat, the two aligned audio files are identical.

The automatic alignment process runs when the new audio file is loaded, and sets the **offset value** automatically to give the flattest null test. Press the **Auto detect** button at any time to run it again.

The offset value is the number of samples by which the new audio is shifted to the left (negative offset) or right (positive offset) relative to the original audio.

If you need to adjust the offset by hand, these additional options are provided:

- **Align left**

The two waveforms are aligned at the start, and markers and edits remain where they are.

- Example: A new version is delivered with a longer fade out. An existing edit at 0:30 stays where it is.

- **Align right**

The two waveforms are aligned at the end, and markers and edits move along the timeline to remain in the correct position.

- Example: The client sends a new version with a 10-second longer intro. A marker at 1:40 is moved to 1:50
- Example: You receive a radio edit without the 20-second intro. An edit at 0:45 is moved back to 0:25.

- **Enter offset value**

Type a positive or negative number of samples into the Offset field to set the absolute position of the new audio relative to the original audio.

- **Nudge buttons**

Move the new audio left or right by 1 or 100 samples

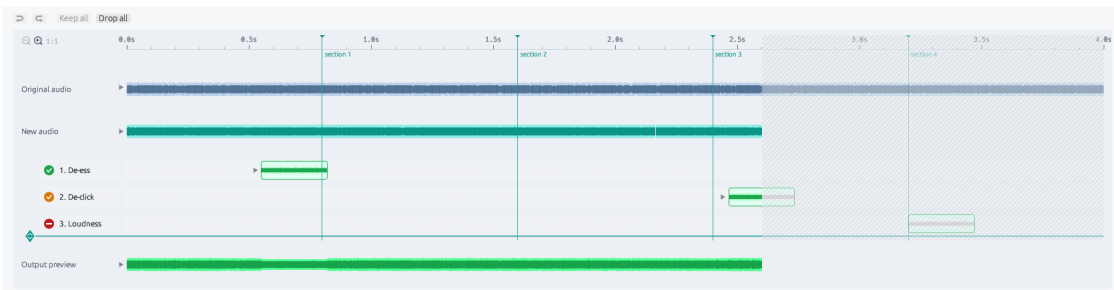
- **Drag and drop**

Move the null test waveform left or right with the mouse to change the offset by eye.

Cropping markers and edits

If the offset results in one or both ends of the original audio being lost (because they extend beyond of the new audio), any markers or edits within that region will be cropped from the final output. If an edit is *partly* in the crop zone, only that part will be cropped.

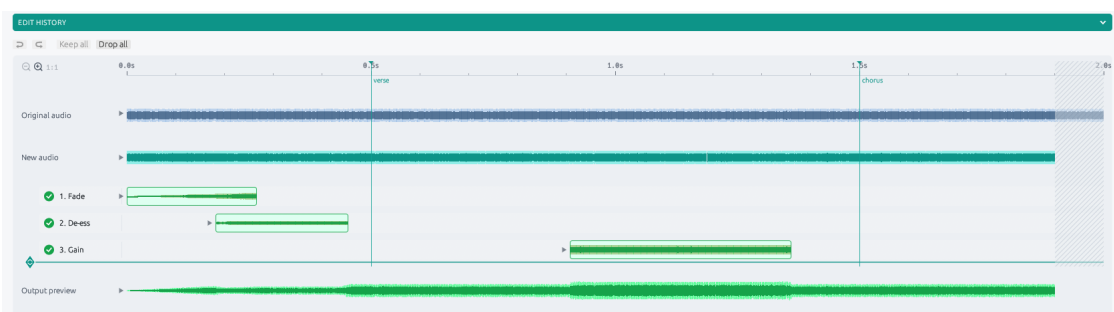
The edit history display shows the crop region as a grey hatched area, as you can see on the right edge in the screenshot below.



Edit History

The Edit History section allows you to **view**, **change** and **listen** to the edit history for the session.

The display flows from top to bottom in time order, starting with the original audio and the new audio, followed by each of the historical edits from oldest to newest.



How Session Updater recreates edits

Session Updater creates new versions of all edits from the original session.

For each edit, Session Updater performs a spectral analysis of the pre- and post-edit waveforms in the *original* session to derive a fingerprint of each edit. This is a mathematical operation, not a machine learning algorithm.

For example, suppose the original session contained a de-ess edit resulting in a precise 200 millisecond EQ cut at 8,000 Hz.

Even though the rxdoc file does not contain the parameters of the edit, Session Updater is able to derive the EQ curve by comparing the before and after, and then re-apply that same 8,000 Hz cut it to the same portion of the *new* audio, replacing the original edit output with a new version.

The reconstruction works well for amplitude-only operations (fade, gain), and is reasonably accurate for LTI filters (EQ moves) and mild dynamic operations such as de-essing and click removal, when the new audio has similar spectral content to the original.

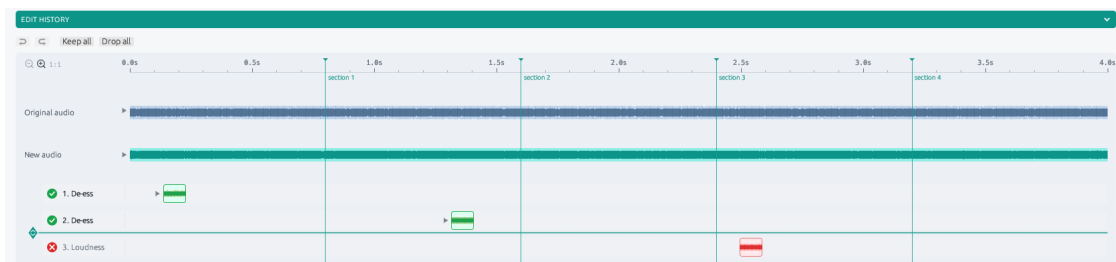
It provides an approximation for non-linear and source-separation operations: rebalancing, spectral repair, dialogue isolation, or heavily de-noised content. The output will be plausible but may have unwanted artefacts.

To make sure you can precisely choose which reconstructed edits you want to keep and which you want to remove, Session Updater provides two ways to include or exclude edits.

The history cutoff control

To the left of the main edit timeline is the history cutoff control. This is a horizontal line with a grab handle at the left end. The position of the line controls how much of the session's edit history is included in the new file when you save.

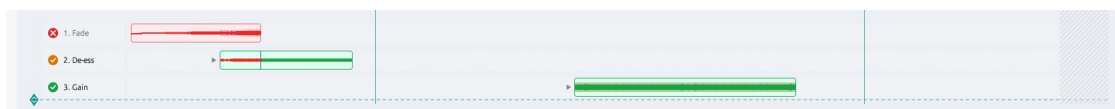
For example, suppose the session had two de-ess edits followed by a loudness edit. By positioning the cutoff control just above the loudness edit, only the de-ess edits will be included in the output file. The loudness edit turns red and its icon changes to a red X.



Manually disabling individual edits

In addition to the history cutoff control you can also manually disable and re-enable individual edits just by clicking on them.

Note: If *later* edit shares the same range of audio as a disabled *earlier* edit, some or all of the later edit is ‘blocked’ from being rendered. This is because the renderer needs to be able reconstruct the entire stack of edits with nothing missing, and in this case one link in that chain is missing. You can see an example of this below.



What the icons mean

At left side of each edit lane an icon is shown which indicates the status of that edit:

green tick	The edit will be fully included in the output
amber tick	The part of the edit which is not blocked or cropped will be included in the output.
red no-entry	The edit has been fully blocked or fully cropped and will not be included in the output.
red cross	The edit has been disabled, either because it is below the cutoff line or because the user has manually disabled it.

Zooming in on the timeline

The whole timeline is shown by default. To look at a shorter stretch in detail, use the zoom controls at the left of the ruler:

- The – and + magnifiers zoom out and in one step at a time.
- 1:1 returns to the full timeline.

On a trackpad you can also pinch to zoom, and scroll sideways with two fingers to move along the timeline.

If an edit is off screen, clicking anywhere on its row will bring it into view.

Auditioning the audio

Every waveform in the display can be played back, so you can hear the result of your choices before saving anything.

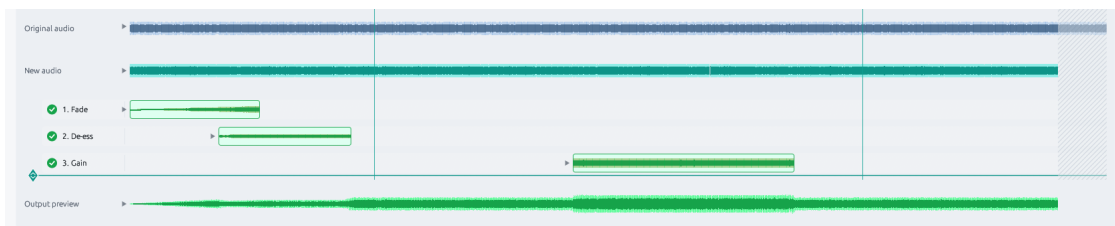
To audition a waveform, hover the mouse over it and either tap the space bar or click the play button which appears at the left edge. Tap space again to pause and resume, or click the stop button to exit playback.

While audio is playing you can click anywhere on the same or a different waveform to jump to that position.

Playing an edit plays the reconstructed version of that edit, in the context of all the edits above, with a 0.5 second pre-roll and post-roll so you can audition the transitions in and out of the edit.

The Output preview at the bottom of the Edit History section plays the finished result. This is the new audio with every edit you have chosen to keep, exactly as it will be written to the new rxdoc file.

Edits shown in red cannot be played, because there is nothing to hear: the edit has either been disabled, or blocked by an earlier edit that was removed. Where an edit is partly green and partly red, only the green section plays.



Null test playback mode

By default the null test plays back the result of the null operation, i.e. the new audio polarity-inverted and overlaid on the original audio.

If you prefer to compare the two sources directly, you can change to an alternative mode in which the original audio plays in the left channel and the new audio plays in the right channel. This can be configured in the About window, accessed via the link in the bottom right of the screen.

Process

Click the Process button to generate your new rxdoc file, with the new audio, markers and whichever reconstructed edits you chose to retain. Once the file has been saved, click the Open button to launch the editor .

Note: This function requires a valid license key.

Trademarks

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Acknowledgements

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