

# File rendering in REAPER

*Sound Design & Music Technologies - LAB*  
*2020/2021*

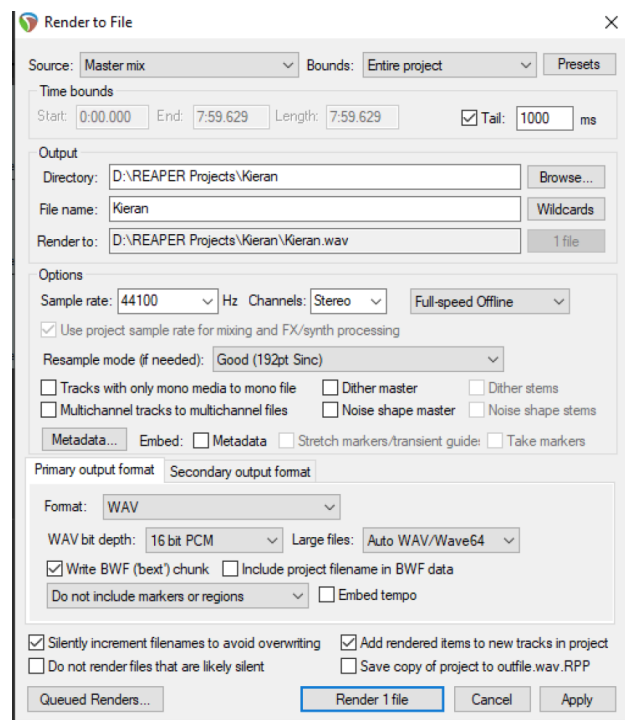
The final step in REAPER is to export your project, take it out of the REAPER. The **Render file** option outputs your material post-processing (including for example all FX and panning). Use this to produce a final mix of your audio project.

## Rendering a Project

Let's say that you have finished your recording, completed your edits, added all your FX and automation, arranged all your tracks . . . and now you want to produce an end product for distribution.

If you're aiming for an audio CD, you will need one 16-bit stereo wave file for each song on the CD.

If you're distributing thru the web, then most likely you will want a series of stereo MP3 files. Whatever format you choose, each project will ultimately need to be rendered down to one file. To do this, we use the **Render** window that you can reach in the **main menu** in **File** → **Render...** or by the shortcut **Ctrl Alt R**. The dialog box (right) shows the various options. You must specify a directory and file name: if you wish, use the **Browse** button for either or both of these. Your other choices will depend on the ultimate destination of your material. A summary of fundamental Render to File dialog box options follows below.



Option	Explanation
Source	<a href="#">Master mix</a> mixes all material to a single file; <a href="#">stems</a> renders selected tracks to separate files, or choose both. Other options are <a href="#">region</a> <a href="#">render matrix</a> or <a href="#">selected tracks</a> or <a href="#">media items</a> (optionally via the master).
Bounds	<a href="#">Entire project</a> exports all the project; <a href="#">Time selection</a> (only the selected region in the timeline of the edit view).
Directory and File name	In <b>Directory</b> , type in a directory of your choosing or use the <i>Browse</i> button. Write the output name of your file in the <b>File Name</b> . The render path and file name to be used will be displayed in the <b>Render to</b> box, just below the <b>Directory</b> and <b>File name</b> edit boxes.
Sample Rate	Select a value in the range <a href="#">8000</a> to <a href="#">192000</a> Hz, depending on output format and other factors. Some examples follow in the table after this one.

<b>Channels</b>	Choose <a href="#">mono</a> , <a href="#">stereo</a> or select a number for multichannel output.
<b>On or Off-Line Speed</b>	<a href="#">Full-speed</a> (default) for fastest rendering. Others include <a href="#">1 x offline</a> , <a href="#">online</a> (play mix while rendering), <a href="#">online (idle)</a> and <a href="#">offline x 1 (idle)</a> . <i>Idle</i> assigns a lower system priority to the render thread, freeing PC resources for other tasks.
<b>Resample mode</b>	Various options allow trade off between speed and quality. Default is 192.
<b>Format</b>	Choose the output format (extension) for your file. Some option are <a href="#">WAV</a> , <a href="#">AIFF</a> , <a href="#">MP3</a> , <a href="#">OGG</a> , <a href="#">FLAC</a> . Other option can include video, like <a href="#">Video (ffmpeg/libav encoder)</a> or <a href="#">MPEG-4/MOV</a>
<b>Format specific options</b>	Other options depend on the format, e.g., for WAV or AIFF files, specify bit depth, for FLAC select FLAC encoding depth and data compression level, for MP3 bitrate mode (e.g., variable or constant) and the actual bitrate, and so on. For the video format like MPEG-4/MOV you have to specify the right format like <a href="#">MPEG-4 Video</a> or <a href="#">Quicktime MOV</a> , the size, the framerate and so on
<b>Render x files</b>	Causes project to be rendered to one or more files, depending on options.

## Project Rendering Examples

Example	Specification
<b>DVD Audio Soundtrack</b>	Sample Rate: 48000 Hz, Channels: Stereo, Output format: WAV format, bit depth: 24 bit
<b>CD Audio</b>	Sample Rate 44100 Hz, Channels: Stereo, Output format: WAV format, bit depth: 16-bit
<b>Web Site / Web Audio</b>	Sample Rate 44100 Hz, Channels: Stereo, Output format: MP3. Other options trade off files size and download time against audio quality, but a typical selection might be CBR (Constant Bit Rate) 96 or 128, Joint Stereo
<b>Video with Audio</b>	Sample Rate: 48000 Hz, Channels: Stereo, Output format: MPEG-4/MOV, specified format: MPEG-4 Video or Quicktime MOV, Size: 1280 x 720, framerate: 30.00 fps, video codec: h264 2048kbps, Audio codec: AAC 128kbps