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# Why I built Ez Game Audio Converter

I started this project after wasting many hours finding, organizing and converting assets for my game project. When you are using mostly free assets from different sources with different formats, bitrates and naming conventions, it can be a real headache and a huge time sink. If you spend all day learning how audio files work, you just spent all day getting nothing done in your project. You shouldn't have to be a audio engineer or terminal wizard just to have audio in the right format.

The Problem: Game devs and anyone else who needs to convert audio files for whatever reason, need to know a lot about digital audio before they can even get started. This is a huge barrier to entry for new game devs and a time sink for experienced ones.

The Solution: A simple, easy to use tool that does all the heavy lifting for you. You don't need to know anything about audio files to use this tool. Just point it at your files and let it do the work. It will automatically select the best codec and bitrate for you. It will even handle loop tags for you. It's the easiest, fastest and most reliable solution available. And it's FREE!

Please leave feedback on Itch.io or Github.

## **Features**

- **See-Friendly Interface:** Designed with simplicity as the main goal, eliminating any learning curve.
- Unattended Batch Jobs: With recursive file searching and unattended conflict resolution, set it and forget it.
- Multi-threading: No job too big or small when all your CPU cores are fully utilized.
- Automatic Bitrate and Codec Selection: Automatically selects the best codec and Variable Bitrate (VBR) at 160kbs(mp3) or near equivalent. Balanced between great sound quality and small file size.
- Comprehensive Format Support: Converts between WAV, MP3, OGG, FLAC, AIFF, and M4A AAC formats. WMA to come.
- Privacy and Reliability: Operates offline, ensuring data privacy and reliability.
- Image: High-Quality Output: Employs FFMPEG for superior sound quality, codec support, and speed.
- Intelligent File Handling: Automatically resolves duplicate file names with different file extensions.

  Selects the best input file format.
- **Meta Data Support:** All meta data, including iTunes data and Apple music will be transferred to the new file. Will transfer all basic meta data to and from all formats that support it.
- Loop Tag Support: All loop meta data will be transferred to new OGG or FLAC files. When changing sample rate, loop timings will be adjusted automatically. Cannot write loop tags TO M4A, only FROM.
- Iga Opus AND Vorbis Support for Ogg: Use Opus when you can and Vorbis when you have to.

## Installation

- 1. Download Latest Release
- 2. Extract Folder "EZ-Game-Audio-Converter"
- 3. Run File "EZ-Game-Audio.exe"

# **Prerequisites**

- Windows PC
- Not required: Windows Terminal from the Windows Store for enhanced visual experience (emoji support 😁 ).

# Usage

- 1. Setup: Follow the setup prompts. It's recommended to copy and paste file paths. Right-click to paste.
- 2. **File Selection:** The application will search for matching files based on the provided criteria and display the list of input files to be converted.
- 3. **Duplicate Handling:** Duplicate file names with different extensions will be automatically resolved, retaining the best or lossless format.
- 4. **Conflict Resolution:** Resolve conflicts for conflicting output files:
  - 0 : Overwrite file with the same name. File will not overwrite itself but will skip instead.
  - o R: Rename the file.
  - o S: Skip the conversion for this file.
  - Adding a to your selection will apply it to all subsequent files.
- 5. Confirmation: Review the list of files to be converted and confirm by typing "yes" or "no" when prompted.
- 6. Conversion: Monitor progress and any errors during the conversion process. Upon completion, logs.csv will be available at the specified file path. Any errors will be logged separately to errors.csv. Some files may produce errors but still convert correctly.

#### Source

Prefer a hands-on approach over trusting random files from the internet? Here's how:

- 1. Clone the repository or download.
- 2. In the project folder, run npm i then npm run build to build the executable. OR
- 3. Run npm i then npm run start to run from your terminal.
- 4. Remember to have ffmpeg.exe and ffprobe.exe located alongside wherever you run the application from. FFMPEG Essentials Build Download

To change things like bitrate and codec, look in converterWorker.js.

#### On Github

#### **Additional Notes**

- M4A files are compressed using the 'AAC' lossy codec. For lossless quality, use WAV or FLAC formats.
- WAV and AIFF uses the pcm\_s16le codec, while OGG uses the older and more compatible Vorbis codec by default.
- Lossy formats utilize Variable Bit Rate (VBR) for increased compression.
- Loop tags handling in this app:
  - Read: Can read loop points from any format (WAV, MP3, OGG, FLAC, AIFF, M4A)
  - Write: Can only write loop points to certain formats (OGG, FLAC, MP3, AIFF)
  - Recommended: For best loop point compatibility, use OGG or FLAC formats

# **Loop Point Support in This App**

Format	Can Read Loop Points	Can Write Loop Points	Notes
OGG	✓ Yes	✓ Yes	Best choice for loop points
FLAC	✓ Yes	✓ Yes	Excellent lossless option
MP3	✓ Yes	✓ Yes	Good compatibility
AIFF	✓ Yes	✓ Yes	Limited player support
M4A	✓ Yes	<b>X</b> No	Loop points not supported in this application
WAV	✓ Yes	<b>X</b> No	Loop points not supported in this application

For best results with loop points, use OGG or FLAC formats.

# **Audio File Type Compatibility**

# **RPG Maker**

Features	MP3	OGG[^3]	WAV	M4A[^1]	MIDI
Loop OK	NO	YES	YES	YES	YES
Loop Inside (Tags)[^4]	NO	YES	NO	YES	YES

File Size Optimize	YES	YES	NO	YES[^2]	OMG YES
Realistic Sound	YES	YES	YES	YES	NO
RMVX/Ace Compatible	YES	YES	YES	NO	YES
RMXP Compatible	YES	YES	YES	NO	YES
RM2003 Compatible	YES	NO	YES	NO	YES
RMMV Compatible	NO	YES	NO	YES	NO
RMMZ Compatible	NO	YES	NO	NO	NO

[^1]: Not needed in 2024? Update: I don't care what they say, it's not needed. [^2]: M4A can be lossless but isn't when converted by this software. [^3]: Opus codec for OGG files is better but Vorbis is more compatible. [^4]: As opposed to the basic looping of an audio file which simply replays the file, loop Tags are a way to tell the game engine where to start and end the loop. Example: A song or background sound effect may start at 0:00 and end at 1:00 but loop from 0:30 to 1:00. This avoids replaying intros in songs and makes seamless loops possible in music and sound effects.

• Source: RPGMaker.net

RPG Maker MV and MZ will play Opus but do not support loop tags. MV will not play Opus in the editor.

If you want Opus loop tags to work to work in RMMV-MZ then you will need my plugin. <u>Download FugsOpusMV</u> Here!

#### Unity

• Supported Formats: MPEG(1/2/3), OGG Vorbis, .aiff, .mod, .it, .s3m, .xm

Source: Unity Documentation

#### Godot

• Supported Formats: WAV, MP3, OGG Vorbis

Source: Godot Documentation

# **Unreal Engine**

- Supported Format: WAV
- Unreal Engine currently imports uncompressed, little endian, 16-bit Wave (WAV) files at any sample rate
  (although, we recommend sample rates of 44.1 kHz or 22.05 kHz). Source: <u>Unreal Engine Documentation</u>

### Ren'Py

• Supported Formats: Ogg Opus, Ogg Vorbis, MP3, MP2, FLAC, AIFF WAV (uncompressed 16-bit signed PCM only)

Source: Ren'Py Documentation

#### **Game Maker Studio**

• Supported Formats: OGG Vorbis, MP3 and WAV Source: Gamemaker.io

## **Additional Comparison**

Detailed comparison of audio formats for games.

Opus bit rate and sample info

Some testing on performance

Comparison of coding efficiency between Opus and other popular audio formats

#### Find me on the web:

Your comments and likes are appreciated for support!

Itch.io Source on GitHub RPG Maker Forums GameJolt Download mirror: ascensiongamedev.com

# License

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#### **Attribution**

- Icon Source
- Guy on forum who helped me a lot

# **Development**

## **Testing**

All tests are organized in the src/\_tests\_/ directory with the following structure:

```
src/__tests__/

├─ integration/  # Integration tests

├─ test-utils/  # Reusable test utilities

├─ test-assets/  # Location for test assets

└─ unit tests  # Various .test.js files
```

#### To run tests:

- npm test Run all Jest tests
- npm run test:unit Run only unit tests
- npm run test:integration Run only integration tests
- npm run test:formats Test just the format support

For more details about testing, see **TEST-README.md**.