

16 kHz Audio Library Guide

This library contains audio files in two formats, MP3 primary files, converted to WAV files for use with the ESP32 audio functions. The WAV files are saved at a sample rate of 16 kHz with their ID3 tags removed. The tools which I used in the conversion process are:

GoldWave – for primary MP3 file adjustment, amplitude and cropping

AVS Audio Converter – creates WAV pcm at 16 kHz 8-bit sample rate, no tags (see settings)

Speech files were created using the free Balabolka, text to speech tool. The ‘Robot’ voice is created from the VW Kate synthesizer, with a rate = +2 and a pitch = -7 and 100% volume. These files are initially created as mp3 tracks and subsequently converted using the programs mentioned above.

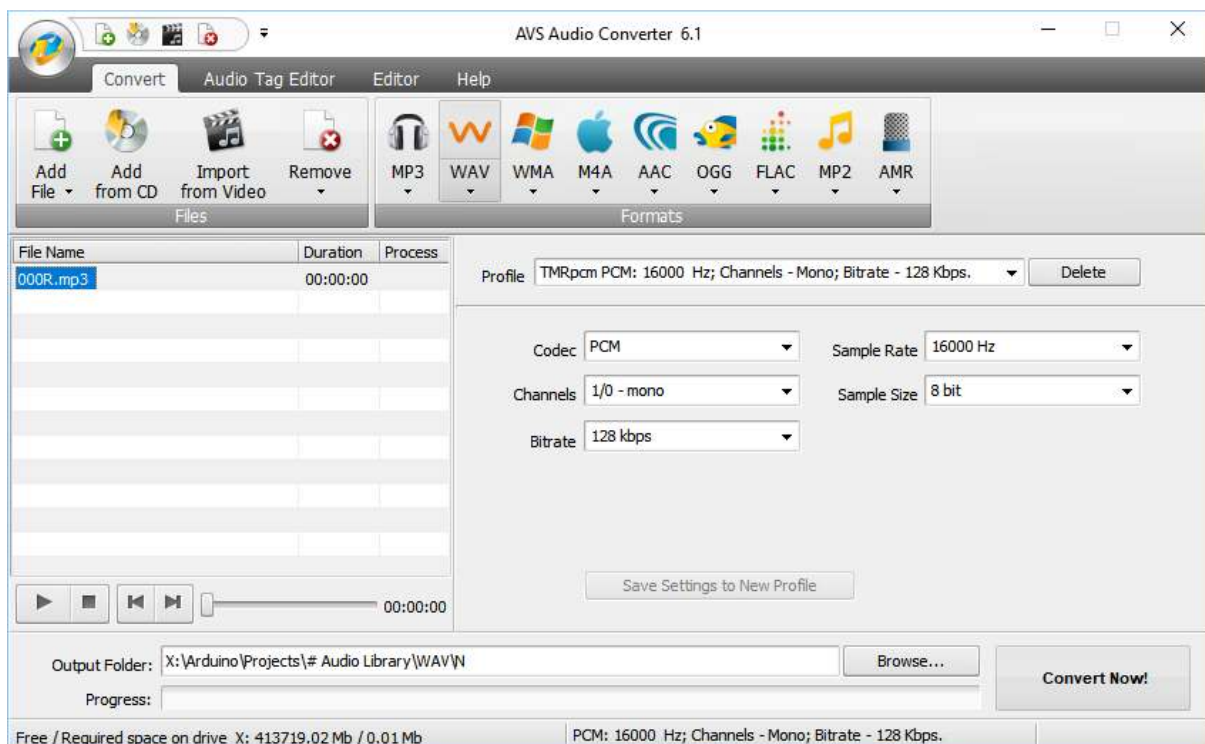
As the Micro SD card is formatted as FAT32 the filenames following the 8.3 convention. To make accessing the files more intuitive they are therefore stored in folders, which indicate the class of file. As different genders can be used in phrases, where appropriate files would have a suffix F-Female, M-Male, R-Robot... as defined in the Library Reference Guide.

For example, the number ‘one’ said by a woman would be found here:

/WAV/N/NU001F.wav and stored on micro-SD, simply as: /N/NU001F.wav

When used with the ESP32 micro, the /WAV/... folder is effectively the root of the micro-SD card, containing the /A, /M, /N, /P folders, and therefore these letters are used in the file path definitions. Note that in playback, the duration is dependent on the length of a given file, plus ramp up and ramp down times, inserted to eliminate clicks between consecutive tracks.

AVS Audio Converter Settings:



Go to the Tag Editor tab and clear all of the tag checkpoints, then apply to all files in the conversion.

