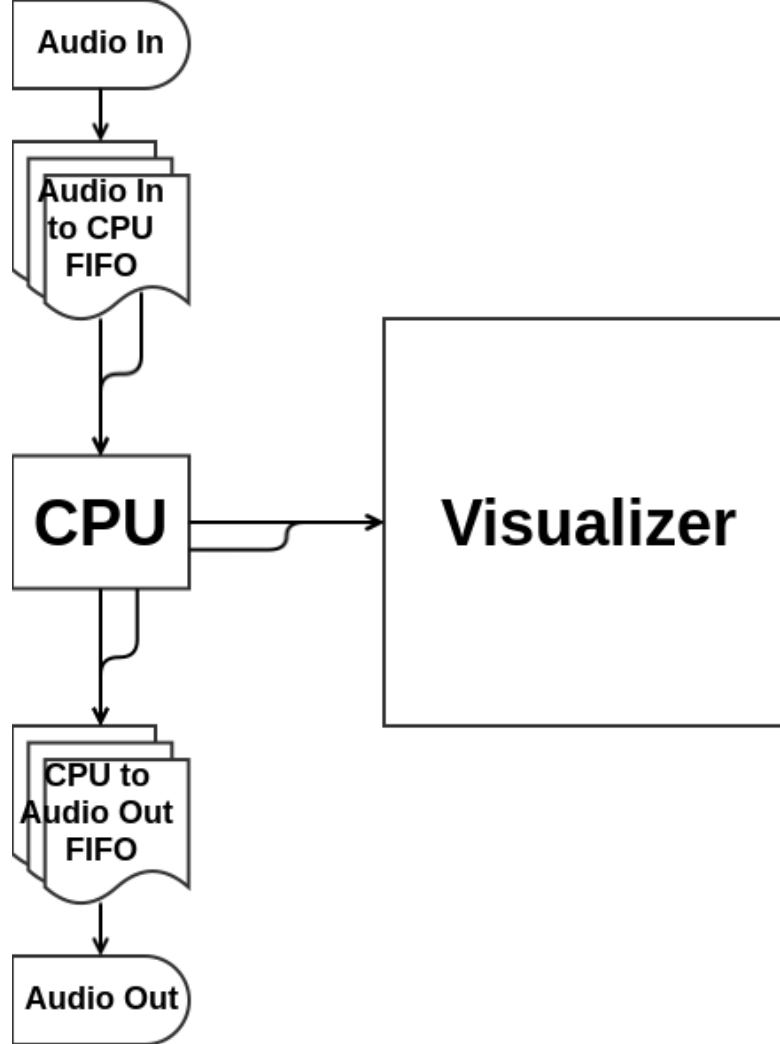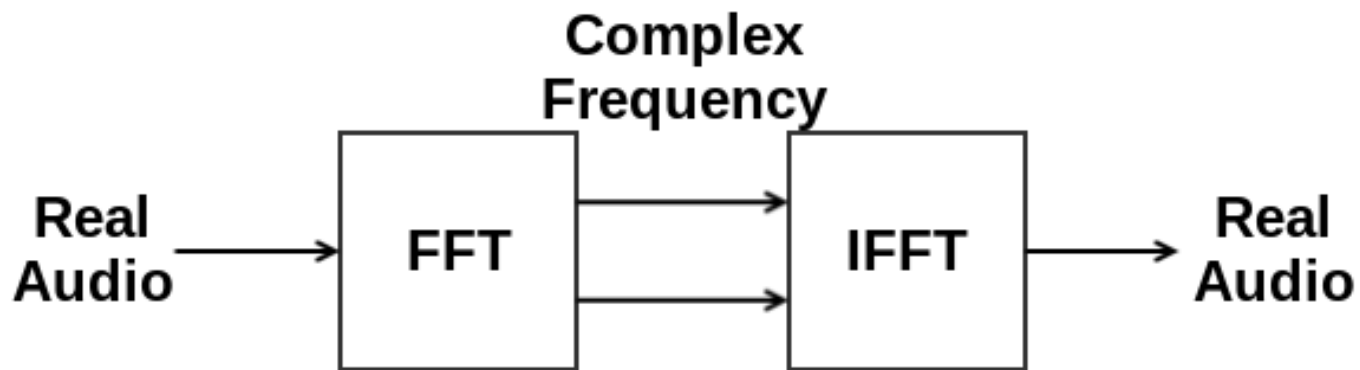# MuseBox

An Audio Equalizer/Visualizer

Overview

- ♫ Read in frequency-domain analog sound wave
- ♫ Use FFT to convert frequency domain to time domain
- ♫ Equalize data in CPU by scaling
- ♫ Map changes in amplitude to visual screen
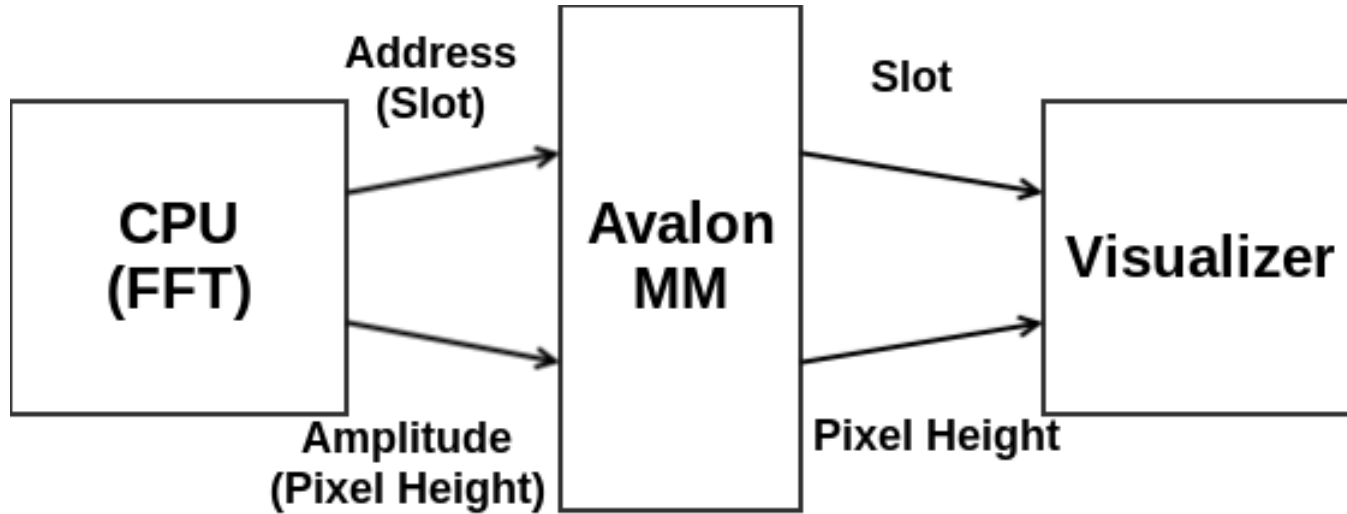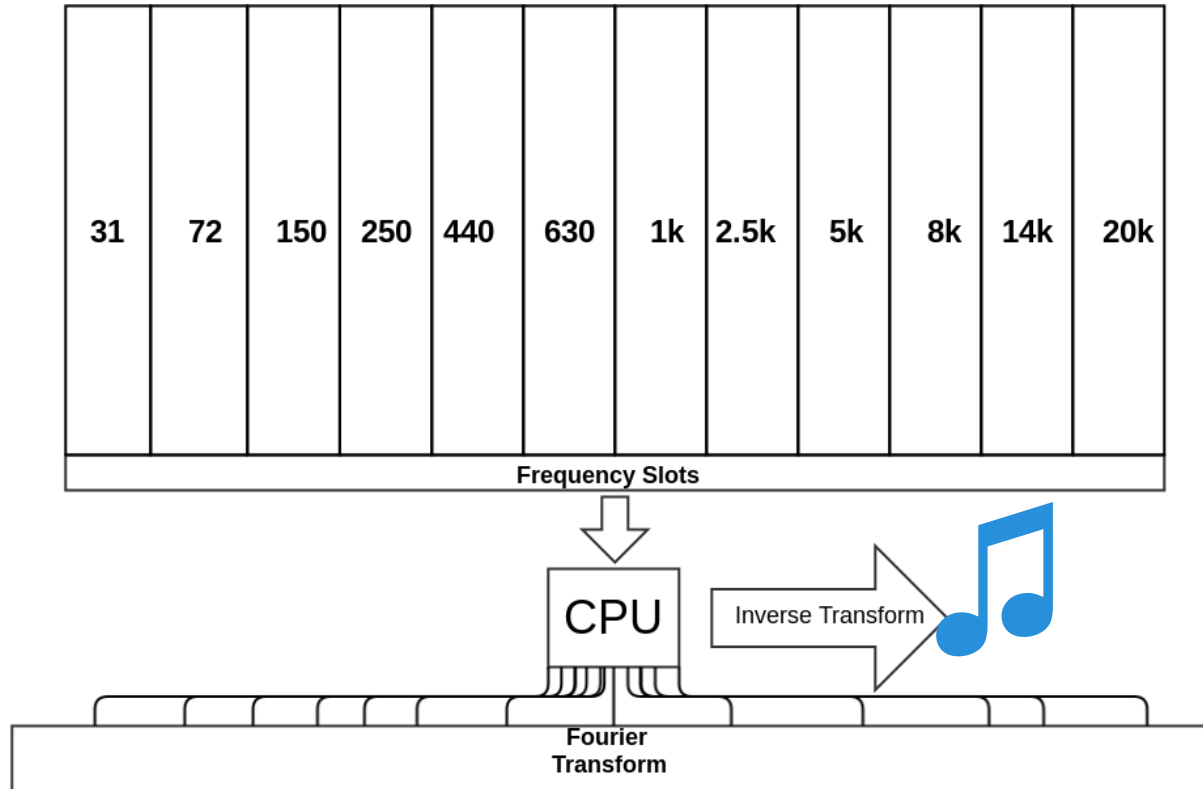- ♫ Send to iFFT then to Audio Out

Design

FFT

Real
Audio → **FFT** → Complex Frequency → **IFFT** → Real
Audio

Visualizer

Equalizer

Overlap Add Method