Chorder User's Guide

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Version 1.5
February 14, 2025

1 Overview

This document introduces the **Chorder** utility.

2 Navigating the Program

There are only two windows in **Chorder**. The first dialog appears when you start the program. It lets you choose the audio track to play, view this help file and other options.

While an audio track is playing, a larger window appears with chord, key and note information.

2.1 The Opening Dialog

The dialog that appears when you launch **Chorder** allows you to choose the next audio file to play, play it and set or clear the location of the "Tools" folder (see below).

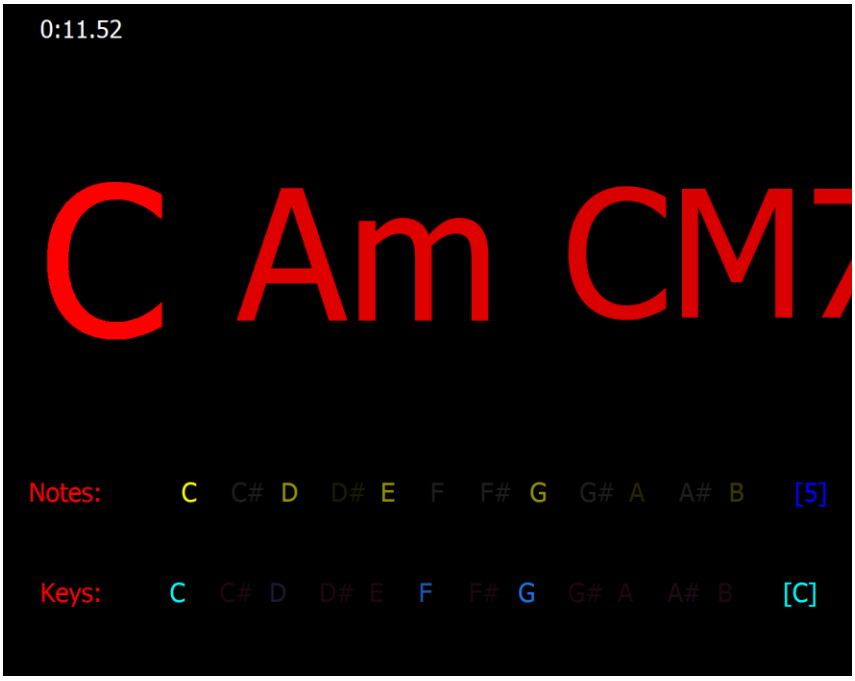
2.2 File Formats

The current version of **Chorder** plays several different file formats, but converts all files except **WAV** files to **WAV** format. ***Chorder is designed to play 16-bit, stereo, 44.1kHz audio files.*** Other **WAV** formats may play correctly, but others, such as 32-bit floating point, will not.

The audio formats currently supported are **WAV**, **MP3**, **M4A** and **WMA**. The video formats currently supported are **WMV** and **MP4**.

2.3 The Chord Display

The "Open" button allows you to select a song to be played. When you click the "Play" button on the main dialog, the chord display window appears.



This is part of a typical chord display window.

The left half of the top line gives the current track time in "***minutes:seconds.hundreths***" format; the right half shows the name of the currently playing file.

The next line shows **Chorder**'s best guesses as to the currently playing chord. The most likely chord is on the far left, and less likely chords are listed to the right. Chords that are equally likely appear the same size. Smaller, fainter characters indicate less likely chord guesses.

The next line shows the notes that the audio analyzer is hearing. The brighter the color, the more present that tone appears to be. These values are summed across the primary octaves.

At the end of the "Note:" line is **Chorder**'s estimate of the current tuning in "cents" from standard pitch (A = 440hZ). It is enclosed in square brackets.

The third line shows similar guesses as to the current key. At the end of the key line, the most likely value is shown, enclosed in square brackets.

3 Using Chorder

3.1 Design Intention

Chorder is not exactingly accurate; no software or human being can be. Realistically, it is designed to give a musician a set of close alternatives to the current chord for the music which is playing. From that point, the player can learn the song through trial and error. This will hopefully be a faster process with **Chorder** than without.

The algorithms that **Chorder** uses consider the history of chords and keys in the song. For this reason, rapid chord changes will often not be reflected correctly.

3.2 Under the Table

Due to the features of Windows it uses, **Chorder** can really only directly handle WAV files. When a different format file is chosen, **Chorder** calls a utility program to convert it to a temporary WAV file.

3.3 The "Tools" Folder

There is an optional feature on the main dialog call the "Tools" folder. Some of the key parameters Chorder uses in its algorithm can be read in from a separate file called "***detect.params***". If that file exists in the tools folder, Chorder will use its parameters instead of the built-in ones.

At the present time there is no need to use this feature. Stay tuned.

3.4 Future Work

Chorder is obviously a work in progress. I do intend to improve its performance, but that will take work.