

DANIEL HERTZ

MASTER CLASS

USER GUIDE

Version 1.04



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Chapter 1 – Introduction

1.1 Welcome

Thanks for purchasing Master Class.

Master Class reflects the personal vision of Mark Levinson and is the result of many years of work by a team of dedicated people who love music and the pursuit of excellence in music reproduction. We thank you for choosing Master Class, and wish you all musical enjoyment. Your support enables us to continue our efforts to develop audio technology in the service of music.

If you have any questions or issues, please send an email to the Daniel Hertz team at support@danielhertz.com. We are happy to help!

1.2 Product Overview

Master Class is a music player software for Mac from mac os X 10.9 up to macOS Monterey with revolutionary capabilities. For the first time in audio history, listeners can have the sound and feeling of SACD and the best analog master tapes from PCM digital sources including CD and compressed music downloads.

Master Class enables the listener to dial in the subtlest corrections and well as the most dramatic. Master Class is the most innovative music player software that features:

- The infamous A+ algorithm that smoothens the PCM step function waveform.
- A six band graphical EQ that lets you refine the tonal balance (frequency response) of the recording and match it to your playback system.
- A Render and export function so you can make an AIFF file of any music track (or batch convert all tracks of a music album) you wish that includes all changes you've made.
- The ability to save and recall your personal settings via presets.

1.3 Components

A) 1 x Master Class software license.

B) 1x Master Class Installer Package (provided via download link) including:

- Master Class Software Installer
- Master Class User Guide PDF
- WIBU CodeMeter Runtime Software Installer for OS X
- Software_License_File.wbb

1.4 System Requirements

Master Class is a 64-bit native Mac application for OS X version 10.9 up to macOS Monterey. The Master Class software application is using copy protection and software license management (CodeMeter) from WIBU Systems.

CPU: Intel CPU (min. Dual Core 2GHz recommended)

Memory: min. 2 GB RAM recommended

Operating System: Mac OS 10.8.2 or higher

Screen Resolution: Minimum: 1024x768

Supported formats: AAC, AIFF, WAV, MP3

1.5 Installation

1. Download the Master Class Installer Package from the link provided.
2. Unzip the Master Class Installation Package ZIP folder.
3. Change Security&Privacy settings to allow apps downloaded from App Store and identified developers
4. Double-click “Master Class Installer.dmg”, drag and drop MasterClass.app” into your Applications folder. You may move the MC icon from the Applications folder to your “Dock”.
5. Open the “CmRuntimeUser” disk image, double click the “CmInstall.pkg” file to start the installation of the WIBU copy protection driver. Follow the onscreen instructions of the installation wizard.

6. Authorize your software by using your personal license file. For details please see paragraph 1.6.

Note: If you do not have authorized your software copy, Master Class will not launch and you will be prompted to provide a valid authorization.

7. Launch the Master Class Software by clicking the “MasterClass 104.app” file and go to Preferences / Security & Privacy and Allow Master Class to load.

1.6 WIBU Systems Copy Protection

The Master Class software application is copy protected using a proprietary “CodeMeter” license from WIBU Systems. Note that a valid user license is required in order to run Master Class. A user license can be obtained as a license file.

Note: Make sure you’ve installed the WIBU Systems “CodeMeter User Runtime for OS X”, which is required for license handling and management on your Mac. The installer file is included in the Master Class Installation Package and alternatively available directly from the WIBU website at <http://www.wibu.com/us/downloads-user-software.html>

1.6.1 Authorization via License File

After you have installed the “CodeMeter User Runtime for OS X”, please follow the steps below.

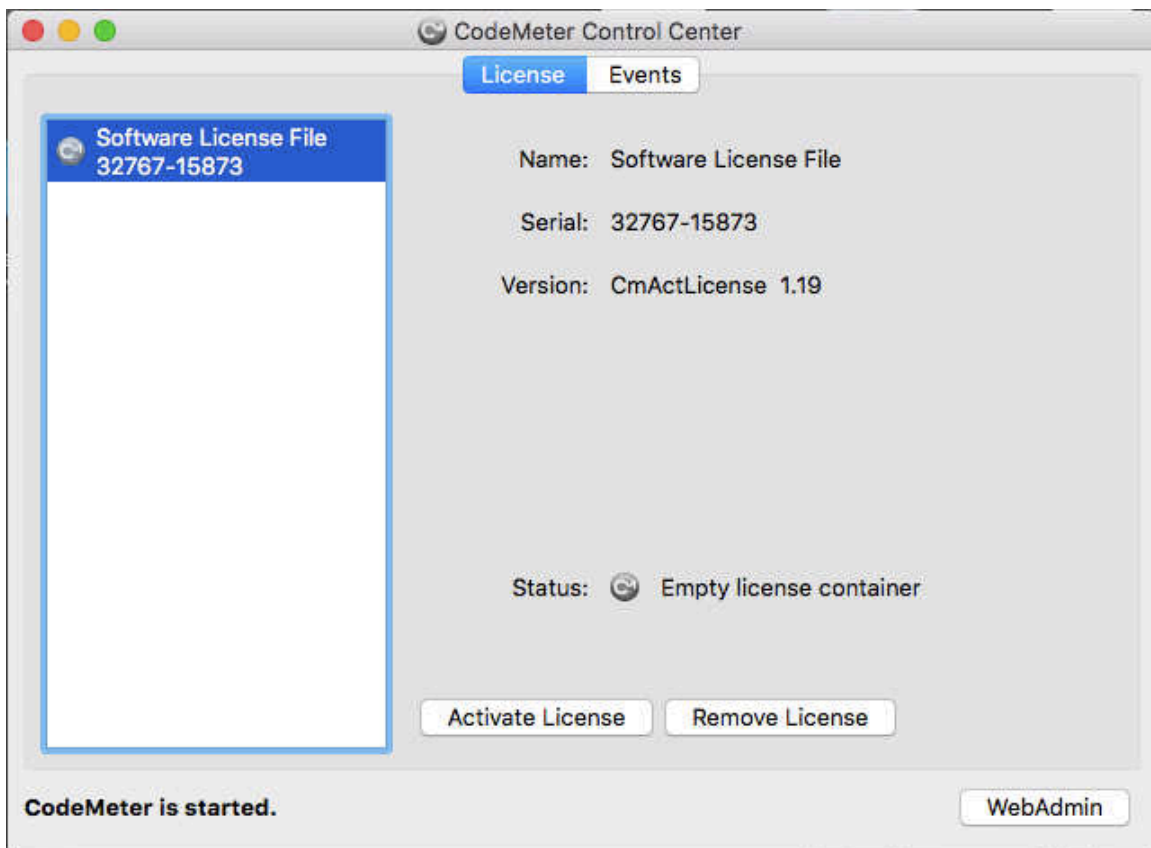
STEP 1: Open the CodeMeter Control Center Application.



STEP 2: Drag and drop the “Software_License_File.wbb” from the Master Class Installer Package folder into the CodeMeter Control Center application.



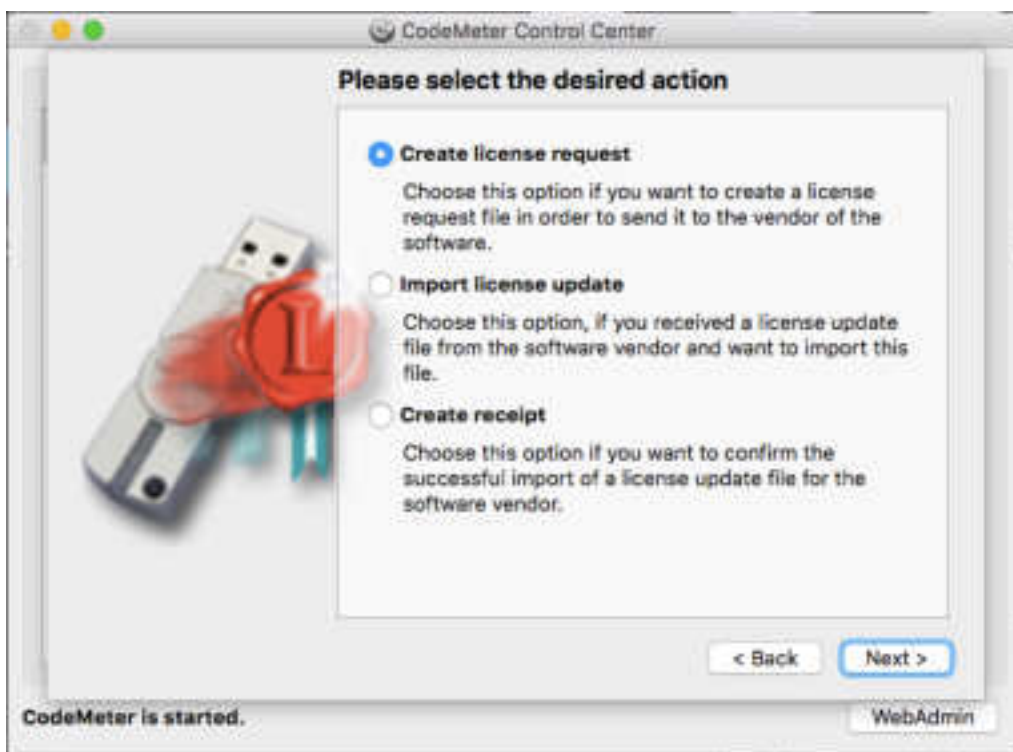
STEP 3: Click on the “Activate License” Button.



STEP 4: Click on the “Next” Button.



STEP 5: Make sure that “Create license” is elected and click “Next”.



STEP 5: Keep the default settings/ location (desktop) and click “Commit”

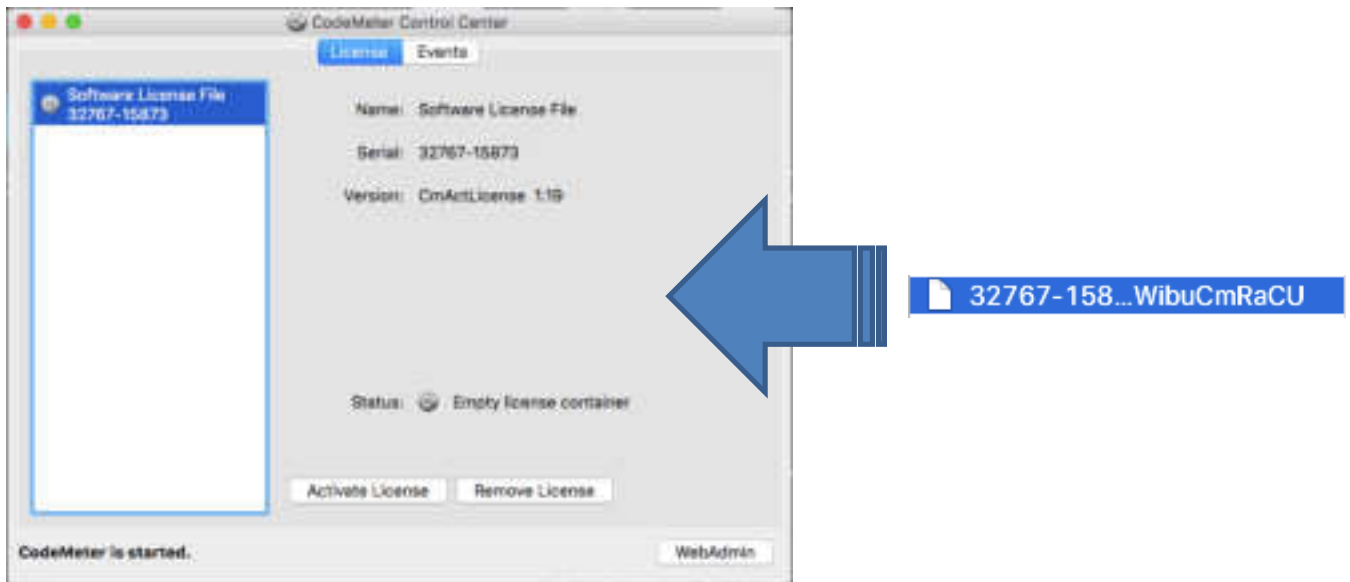


STEP 6: Send the created license request file (*.WibuCmRaC) by email to support@danielhertz.com.

STEP 7: Once you’ve received a reply from our support team by email, please open the “CodeMeter Control Center” application on your Mac...



STEP 8: ...and drag & drop the attached license (*.WibuCmRaCU) from the email into the CodeMeter Control Center to complete the authorization process.



NOTE: To double-check and display information on activated software licenses run the CodeMeter® tool by clicking the WebAdmin Button.

1.7 Concepts and Terminology

1.7.1 Understanding A+

The analog waveform is smooth. The PCM digital waveform is a step function that only approximates a sine wave. The human brain, like the sine wave, is from nature. The PCM digital audio step function waveform is something made by technology that does not exist in nature. A+ is proprietary algorithm that fills in the “steps” to smoothen the waveform so the brain responds more like if it were a sine wave. A+ uses the original signal to generate the “fill” so there is no non-musical information being added. A+ adds no noise or filtering.

1.7.2 Understanding EQ

In record production, mastering is the final step. EQ (Equalization) is the main tool used by mastering engineers to refine the sound of a recording. The adjustments made in the mastering studio may or may not match the tonal balance (frequency response) of your playback system. Master Class give you a way to fine tune the sound of the recordings you play to your system with your own ears.

Human hearing can usually recognize a difference of 0.2dB in the middle frequency range. You can prove that with Master Class by dialing in -.2dB at 2kHz, and switch it on or off using the on/off controls (bypass, EQ on/off, or the individual 2kHz control on/off). There are many sources of shift in frequency response. In the recording process, moving a microphone a fraction of an inch can dramatically change the tonal balance of the music. Microphones, electronics and transducers are not perfectly flat. Errors add up. 0.1dB here, 0.2dB there can add up to substantial amounts.

EQ is a tool that is used to overcome real world imperfections in frequency response. With recording, there is no absolute because there are too many variables. Recordings from different eras and genres are made by different engineers with different equipment. The most important thing is that you are happy listening to your recordings on your system. That’s what Master Class is all about.

1.7.3 Description of Frequencies in Musical Terms

- 40 Hz is for deep bass fundamentals.
- 120 Hz is for the heart of the bass and weight of the instr. and voices.
- 500 Hz is for warmth.
- 2 kHz is for the heart of voices and presence.
- 5 kHz is for high frequencies.
- 20 kHz is for the highest frequencies, overtones, air and space.

Chapter 2 – Quick Start Guide

2.1 Getting Started

1. Click on Add. Select a track to practice with from your music files anywhere on your Mac. Click Play and the music will start. Adjust the volume with your amplifier or preamplifier volume control.
2. Master Class provides two technologies: A+ smoothens the PCM step function waveform; and EQ is used to refine the tonal balance (frequency response) of the recording and match it to your playback system. When you turn A+ on and off, you may hear little or no difference, as the sonic effect is subtle, but listeners generally find that the feeling is more relaxed like analog. If your system has smooth overall response, just A+ may be improve many well-made recordings, but some EQ is usually able to make even the best recordings even better by matching them to your playback system.
3. Make sure the EQ and A+ boxes are checked. Bypass should have no check.
4. Adjusting EQ is like focusing a manual camera. Too far, too close, just right. In audio terms, too much, too little, just right. Sliding up and down slowly is best.
5. A good place to start is with the 2kHz control. Slowly, slide the 2kHz control up and down. Go up until it is too much, then go down until it is too little. Find the point where you feel the level is right. With a good recording, a few tenths of a dB (.2dB -.5dB) can make a meaningful difference. A more limited recording may require much more correction.
6. Repeat step 3 with the other 5 controls. Use all controls: 40Hz, 120Hz, 500Hz, 2kHz, 5kHz, and 20kHz.
7. You may have to lower the Input Level if you raise any frequency of a heavily modulated recording. In practice, small adjustments are usually tolerated without lowering the input level. In some cases, the input level must be reduced by as much as the largest boost you have made. For example, if you boosted +3dB at 120Hz, and the recording is fully modulated at that frequency, you will need to reduce the Input Level by 3dB to avoid clipping. The Output Level can be used as a volume control of volume trim to adjust the listening level. If you are making comparisons with the Bypass control, be careful – in the Bypass mode, the Input Level and Output Level are bypassed. For Bypass comparisons, it is generally best to leave the Output Level at 0dB.

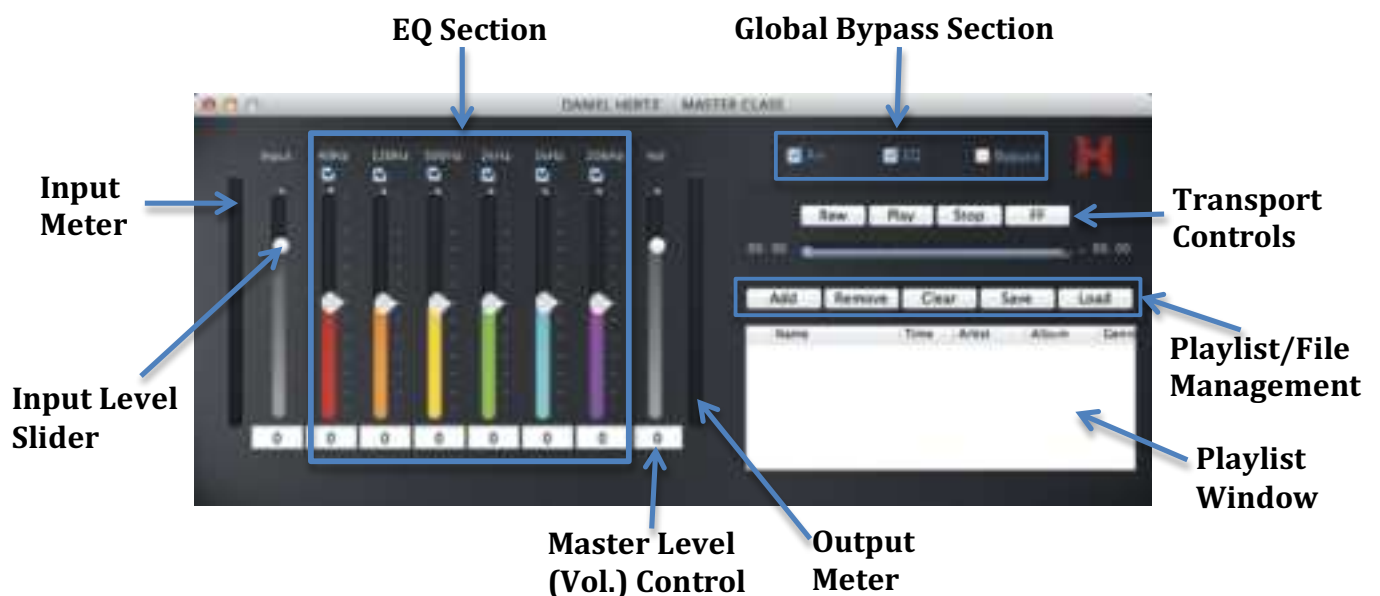
Chapter 3 – Interface and Controls

3.1 Interface (GUI)

The Master Class graphical user interface (GUI) is intuitive and ergonomically designed. The left portion of the interface is dedicated to level and equalization attenuation while the right section enables overall processing and control of the playback transport and playlist.



3.2 Controls



3.2.1 Input and Output Level

The **Input Level Slider** controls the input signal level.

Range: +6/ -20 dB, default: 0 dB;

The **Master Level (Vol) Control** adjusts the main output level.

Range: +6/ -20 dB, default: 0 dB;

The level meters (**Input Meter**, **Output Meter**) indicate the presence of proper levels. Green (good), Yellow (optimal), Red (too hot). Make sure to attenuate the input signal level if meters are constantly red to avoid clipping.

Note: Input and output level control only works if Bypass is unchecked in the Global Bypass Section.

3.2.2 EQ Section

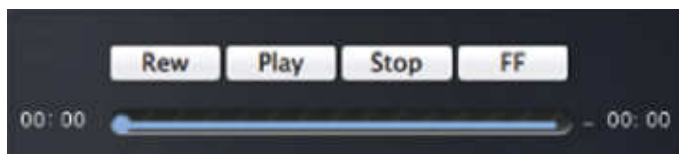


The **EQ Section** consists of 6 bypassable bands with center frequencies at 40Hz (red slider), 120Hz (orange slider), 500Hz (yellow slider), 2kHz (green slider), 5kHz (blue slider), and 20kHz (purple slider).

The gain may be adjusted in the range +12.0 to -12.0 dB, in increments of 0.1dB via the numeric Gain Value Windows or by dragging the EQ sliders.

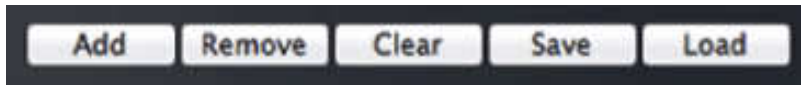
Individual frequency controls are bypassed when you unclick them at the top of the page.

3.2.3 Transport Controls



Play/ Pause, **Stop** (and return to zero), **Rewind**, **Fast Forward**, Timeline navigation and Counter.

3.2.4 Playlist/ Music File Management



Add music file(s) to playlist

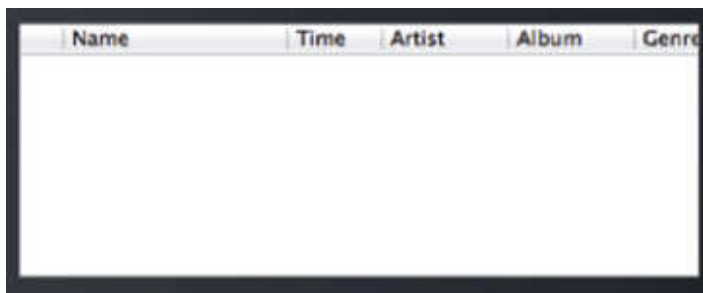
Remove selected music file(s) from playlist

Clear current playlist

Save playlist

Load playlist

Playlist Window



The Playlist Window shows the content of your playlist. By default, items in a playlist are played in the order they appear in the list. You can change the order of the items by dragging and dropping them within the list.

Name, Time, Artist, Album, Genre Columns: Displays metadata associated with audio files.

3.2.5 Global Bypass Section



Click Bypass to remove A+ and EQ (the tuning you have done).

EQ is turned off when you unclick the EQ box.

A+ is turned off when you unclick the A+ box.

Chapter 4 – Appendix

4.1 Make, Save and Load a Playlist

Any number of music files can be added to make a playlist. Playlists can be stored and loaded from the File menu commands or the commands (3.2.4) on the GUI (Graphic User Interface).



4.2 Make, Save and Load a Preset

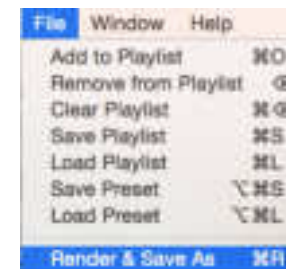
When you are happy with the corrections you have made, save a preset. Go to File/Save Preset; label it (you can add ps at the end so you know it is a preset) and save it in a folder you might call MCP (Master Class Presets).

To recall the preset, go to File/Load preset and select the preset you want. All the adjustments you made are recalled.



4.3 Render and Save as

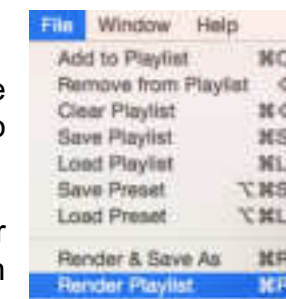
You can make a single AIFF file of any music track you wish that includes all changes you made. Go to the Menu Bar/ File/ Render and Save As; label the file (you can add "MC" at the end so you know it is a Master Class file); and put it in a folder.



4.4 Render Playlist (Batch File Conversion)

To apply batch processing (applying the changes you made to all tracks of an album), simply add all tracks of an album to the playlist.

Go to the Menu Bar/ File/ Render Playlist; make a folder named "The Album MC" which you select as the destination folder (so you know it's a Master Class album); "MC" to each track inside the album folder will be added automatically.



4.5 Invisible Areas

See the “Invisible Areas” image below to know where to click to return a specific control to 0dB or to reset all controls (clear) to 0dB.

