

Audiobook Essentials

Process and Master Your Recorded Audio for Distribution

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What is Audiobook Mastering

- Meeting loudness requirements
- Meeting noise floor requirements
- Meeting peak audio requirements
- Conforming audio to space requirements between sections
- Meeting file type requirements
- Sonically processing audio to acceptable (and creative) levels
- Naming files correctly

Peak, RMS, Limiters, Eq's ????

When entering the mastering phase of audio production, people are often confronted with terms and standards they don't understand.

Peak level is the level at which the highest (loudest) peak hits, in volume.

RMS or Root Mean Square, describes a level given to the audio as an average over time. RMS is used to gauge the average volume of an entire track or body. RMS is also used to balance many chapters into the same audio average space even if some are more or less dynamic. RMS won't change the level of dynamics in the audio, it simply finds the average in decibels and then adjusts the audio to the threshold you set.

EQ, or equalization is a processor used to boost or cut (or shape) the frequencies of your audio. Things like bass boost, treble enhance, noise reduce, etc. Think of general tone controls.

Limiters are used to compress audio dynamics with respect to a hard ceiling which audio cannot pass. Limiters, good ones at least, reduce peaks of audio in a musical way, meaning they reduce dynamic range without artifacts of over-modulation.

Mastering Standards

ACX & Audible require specifications to be adhered to for a book to be considered mastered. Audio outside these specifications will be rejected.

ACX / Audible Standards

- Audio format
 - Working File = Mono / 16 bit / 44,100 Hz / WAV
 - Final File = Mono MP3 192kbps
- Time gaps (room tone) between sections of each file
 - .5 sec at head / 2.5 sec between title & body / 3.5 sec at tail
- Audio Loudness / Peaks / Noise Floor
 - Loudness between -18 and -23 RMS
 - Peaks not above -3 dB
 - Mastered noise floor at -60 dB or lower
- All bodies as separate files (including an opening, closing credit and retail sample)

Let's Get Started

Plugin Installation

Limiter (Loudmax)

- <http://loudmax.blogspot.com>
- Download AU version of Loud Max (Audio Unit Version)
- Unzip the downloaded .zip file
- Copy the .components to the correct locations (see slides)

Install Loudmax in System Library

- Click on finder app (smiley face) in dock
- Use the shortcut **SHIFT+COMMAND+G**
- In 'Go To Folder' box, type
- **/Library/Audio/Plug-Ins**
- Drag in the
 - Component to components folder
 - VST to VST folder
 - VST3 to VST3 folder
- Authenticate with your system password if necessary
- Completely quit and restart Twisted Wave for plugin to show up

Equalizer (TDR Nova)

- Tokyo Dawn TDR Plugin
- <https://www.tokyodawn.net/tokyo-dawn-labs/>
- Click on 'Free Download' button for TDR Nova
- Click on Mac Package version of download options
- Install the plugin using the supplied package installer
- Completely quit and restart Twisted Wave for plugin to show up

Recording Recap

Notes On Recording

Recording should be done *after* you've prepared. This often means reading the part of the book you'll record *before* you sit down to do so.

Recording should be done when it's most quiet. Noises that show up mean you'll need to re-record. *Pay Attention!*

Record a whole chapter or section at a time.

Record 10 seconds of room tone at beginning.

Name files with proper names, no abbreviations!

Dealing With Mistakes

- Define a method for visual confirmation of a mistake
 - Marker / Snap / Clicker
- Learn about and possibly use Punch & Roll
- Don't edit while recording, it breaks flow
- Markers stay with file and come back after a save and close

After Recording

- Save As... to WAV audio
- Save the body to the recordings folder in your new book template
- Name the body in human readable text
 - Tale Of Two Cities - Chapter 01 (notice leading 0 in 'Chapter 01')
 - Tale Of Two Cities - Opening Credit
 - Tale Of Two Cities - Retail Sample
- When naming, stick to approved characters (space, underscore, dash)

Editing

Editing notes

- Approach editing by fixing corrections first
- Copy a chunk of clean (listen to selection) room tone to clipboard (Greater than 5 sec)
- QC (quality control) the chapter while also fixing sound issues (breaths, ticks, noise, etc)
- ALWAYS vertically zoom when editing, paying attention to noise floor issues first
- ALWAYS edit using headphones, NEVER use the speakers on your computer
- Use Special Paste to fill room tone (saves time)
- No breaths before new paragraphs / sections
- Leave normal breaths alone, minimize loud ones that need to stay
- Destructively save over chapter as you progress, leaving you with one copy of the body

Special Paste

- Replaces selection with clipboard contents
 - Replaces *variable* amount up to the copied amount
- Need to copy more room tone than you'll need, 5 or more seconds is good
- Room tone should be free of defects and noises to alleviate loop problems
- This *little* change saves an *immense* amount of time

Demonstration

Basic Mastering Workflow

- Import WAV file
- Perform Pre-Master Processing
 - **EQ (High Pass)**
 - **Restoration** Processing (De-Click, De-Ess, NR)
 - De-Essing / Compressing
- Analyze File Loudness
- Using loudness measurements, perform normalization and limiting workflow
 - Finalize and limit audio to specified RMS and Peak levels
- Export files in formats needed
 - MP3 (mono 192 kbps)
- Verify file naming
- Upload or distribute