



Impulse Response Libraries

412 ZLCS V30
MASSIVELY MULTI-MICROPHONE
COLLECTION

Information Manual

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ABOUT THIS LIBRARY

THE CABINET

The “412 ZLCS” is based on a custom shop, unique specification Zilla 4x12 cabinet. In this library there are 3 iterations, each differing in sound from changes in the configuration of the front grill, labeled as follows:

“412 ZLBW” = thick cane basketweave clothed grill

“412 ZLCS” = small weave white cane clothed grill

“412 “ZLNG” = no grill

THE SPEAKER

The “V30” is based on 1999 Celestion T3904 Vintage 30 speakers.

THE POWER AMP

This library’s captures were driven by a mostly neutral tube power amplifier. While the overall frequency response is largely even like that of a solid state reference amplifier, the common tube amp deviation traits are present that both liven and thicken up the sound ever so slightly. As such they are ideal as-is with accurate modeling platforms and tube amps sent to dummy load + line out devices. For platforms that need the little extra scoop of modestly configured guitar tube amp driven files, this is quickly and easily accomplished by implementing the following simple post processing adjustment:

SOUNDING LIKE GUITAR TUBE AMP DRIVEN IR’S

As aforementioned, the IR’s in this library were driven with tonally neutral tube based power amplification. There is a very quick, simple step that can be applied to replicate the sound of IR’s that were instead driven by a guitar tube power amp with the Presence and Depth set to 0, which results in a mid scoop.

To simulate this sound, following the cabinet IR loader add an EQ with a parametric bell curve set to -3 dB at 400 Hz. Adjust the Q/bandwidth to roughly where the edges of the curve start to make the initial cut around 100 Hz on the low side and 2 kHz on the high side. If necessary, adjust the Q/bandwidth to taste from here to best suit your sound source and tonal preference.

THE MICS AND MIC MIXES

In this library, the speaker cabinet was sampled with many microphones and capture types.

For microphones with position numbers 00 through 10, these positions represent movement across the face of the speaker along the relative sweet spot from brighter and closer to center (00) to darker and further out on the cap or cone (10). These numbers do not represent any specific unit of measure and are merely sequential arbitrary definitions.

Positions labeled “EDGE” place the microphone near the rim of the speaker cone, but still in a tonally usable area.

Positions labeled “FRED” place the microphone at the very center of the speaker at a 45 degree angle, ala the off axis component in the popular “Studio Fredman 45” technique.

Below are explanations of the mic models and pre-made mix types:

SUMMARY FOLDER

The mix file in the “Summary” folder is based on a D57M + C70 + R121 mic combination. This mix fits somewhere in the middle of the brightness and darkness scale of the OwnHammer pre-made mix types.

CORE MIXES

“BOLD” is a mix that has a forward midrange with a slightly relaxed top and bottom end.

“BROWN” is a more pleasing derivative of the “brown sound”, using a similar hardware configuration.

“CL1” is a page from classic rock, using only condensers and ribbons which are pulled back a little from the cab.

“CL2” is a thicker and slightly darker version of CL1.

“CUT” is comprised of an on-axis D57M and off-axis D57M mic combination.

“CUT+121” adds a 121 mic to the Quick-Start CUT mix recipe.

“CHUNK” is a more “fat” sounding version of the BOLD mix.

“HARD” merges a dynamic and ribbon mic for a slightly harder edge sound than the classic 57+121 combination.

“JPS” is a ‘Studio’ voiced mix using hardware utilized by a legendary Long Island prog rock/metal guitar icon.

“JPL” is the darker ‘Live Sound’ counterpart based on documented placements used for this artist’s touring rig.

“JS” is a multi-mic configuration created by [Jon Symons](#).

“MDRN” is comprised of a D57M + D421V mic combination.

“METAL” mixes mics that elevate the top and bottom end, resulting in a slight mid scoop and forward aggression.

“OH1” is comprised of a D57M + R121 mic combination.

“OH1F” is comprised of a more “fat” sounding D57M + R121 mic combination.

“OH2” is comprised of a D421V + R121 mic combination.

“OH2F” is comprised of a more “fat” sounding D421V + R121 mic combination.

“OH3” is a darker mix originally intended for live sound, but also excels with brighter pickups/guitars for studio.

“OH3F” is comprised of a more “fat” sounding version of the OH3 mix.

“OLDE” is comprised of vintage and vintage style ribbon mics bolstering the sounds of yesteryear.

“RIP” is comprised of a D57M + R160 mic combination.

“SOFT” is comprised of a vintage dynamic and ribbon mic combination with a relaxed and pleasing tonality.

“SP2” is a multi-mic configuration created by [Scott Peterson](#).

MIC PAIR MIXES

In the Mic Pair Mixes section, the Quick-Start position for each mic is combined with the Quick-Start position of a second mic, with the first mic listed being dominant in the mic mixture. For mixes of the first mic type combined with itself, multiple placements across the positioning spectrum were merged, with the Quick-Start location being the most dominant of all that are included.

MICS

Auxiliary Placements

“AUX” is a mixture of the FLOOR, MID, REAR, ROOM, and RESO captures.

“FLOOR” is comprised of a ground plane placement using a Crown PZM-6D.

“MID” is comprised of a mid field placed AEA R92 ribbon microphone.

“REAR” is comprised of a cabinet rear placed vintage Neumann KM84 condenser microphone.

“RESO” is comprised of multiple placements that augment the midrange resonance of the cabinet.

“ROOM” is comprised of a room placed vintage Neumann KM84 condenser microphone.

“SUB” is based on a close mic’d Yamaha SubKick.

Condenser Microphones

“C12” is based on a heavily modified Avantone CV-12.

“C30” is based on an Earthworks TC30.

“C32” is based on a Shure KSM32.

“C67” is based on a Neumann U67 with a vacuum tube internal preamp module.

“C70” is based on a Microtech Gefell UMT70S.

“C84” is based on a vintage Neumann KM84.

“C87” is based on a vintage Neumann U87.

“C88” is based on the ‘mid’ element of a Shure VP88.

“C200” is based on a Mojave Audio MA-200.

“C414” is based on an AKG C414 B-ULS.

“C2011” is based on a DPA 2011C.

“CIWI” is based on a Blue Kiwi.

Dynamic Microphones

“D5” is based on an Audix i5.

“D6” is based on an Audix D6.

“D7B” is based on a Shure SM7B.

“D20” is based on a Heil PR20.

“D30” is based on a Heil PR30.

“D57B” is based on a Shure Beta 57A.

“D57M” is based on a modern production Shure SM57.

“D57V” is based on a vintage Shure Brothers Unidyne III SM57.

“D58” is based on a Shure SM58.

“D88” is based on a Beyerdynamic M88 TG.

“D201” is based on a Beyerdynamic M201 TG.

“D409” is based on a vintage Sennheiser MD409.

“D421M” is based on a modern Sennheiser MD421-II.

“D421V” is based on a vintage Telefunken/Sennheiser MD421-5.

“D441” is based on a vintage Sennheiser MD441.

“D545M” is based on a modern Shure Unidyne III 545SD.

“D545V” is based on a vintage Shure Brothers Unidyne III 545D.

“D549” is based on a vintage Shure Brothers Unidyne IV 549.

“D906” is based on a Sennheiser e906.

Multi-Element Microphones

“M2500” is based on an Audio-Technica AE2500.

Ribbon Microphones

“R84” is based on an AEA R84.

“R92” is based on an AEA R92.

“R121” is based on a Royer R121.

“R160” is based on a Beyerdynamic M160.

“R4038” is based on a Coles 4038.

“R6203” is based on a vintage 1940’s RCA MI-6203 “Varacoustic”.

“R313” is based on a Shure KSM313.

“RFAT” is based on a Cascade Fat Head II.

PLAYER

The “Player” folder is comprised of Player Pack (ownhammer.com/playerpacks) type content.

Mics

“57” is a copy/paste of the D57M Quick-Start selection.

“87” is a copy/paste of the C87 Quick-Start selection.

“121” is a copy/paste of the R121 Quick-Start selection.

“160” is a copy/paste of the R160 Quick-Start selection.

“414” is a copy/paste of the C414 Quick-Start selection.

“421” is a copy/paste of the D421V Quick-Start selection.

“B” after the mic model number indicates a bright alternative position.

“D” after the mic model number indicates a dark alternative position.

“REAR” is a copy/paste of the REAR capture.

“ROOM” is a copy/paste of the ROOM capture.

Multi-Mic Mixes

“ALL” is a Player Pack exclusive mix that is comprised of all six primary microphones mixed together.

“BAL” is a Player Pack exclusive mix with a relatively equal distribution of lows, mids, and highs.

“CUT” is a copy/paste of the CUT Quick-Start selection, with tight lows and cutting upper mids.

“FAT” is a copy/paste of the OH1F Quick-Start selection, with fat and thick lows and low mids.

“FULL” is a copy/paste of the SP2 Quick-Start selection, with a full body and lively top end.

“FWD” is a copy/paste of the OH1 Quick-Start selection, which is more forward and ‘in your face’.

“MDRN” is a copy/paste of the MDRN Quick-Start selection, which is even but still modern and slightly aggressive.

“RIP” is a copy/paste of the RIP Quick-Start selection, with searing upper clarity and a dose of fatness.

“VNTG” is a Player Pack exclusive mix with a smooth top end without excess low end.

“WARM” is a Player Pack exclusive mix which is warm and full in the low mids and midrange.

QUICK START CONTENTS

The Quick Start folder contains the OwnHammer picks for the most universally ideal single mic and mix positions. Though your mileage may vary, this is a great starting point to get an idea of the overall sound of the cab, speaker, mics, and mixes, and discovering which options you may wish to explore further in the auditioning process.

MID BOOST FILES

In the Quick Start folder, all contents have a traditional entry picked from the Mics and Mixes sections, as well a Quick Start contents exclusive feature: the mid boost alternate voicing. The Mid Boost files end with an “M+”, and can be useful in counter balancing bright or scooped amps or amp models, guitars and pickups, bus processing, and/or playback systems – especially PA’s at high volumes. M+ IR’s can also be appropriate for exposed and center panned solo/lead guitar sections in both tonality and feel, or personal/artistic preference to mid heavy tones.

WAVE AUDIO FORMAT FILES

The Wav folders contain files in .wav format for use in any convolution reverb loader, be it DAW hosts or external hardware devices. These files are formatted in 44.1 kHz, 48 kHz, 88.2 kHz, and 96 kHz sample rates in mono channel count.

For information concerning loading of these files into the host of your choice beyond what is included in this user manual and additional text files in the directory structure, please refer to their website or documentation.

FILE DECAY TAIL AND MINIMUM PHASE TRANSFORMATION

This library contains various configurations of decay (reverb) tail truncation level and minimum phase transformation. These elements can change the sound as well as the compatibility with various platforms or ease of use when mixing IR files.

WAV-200MS

Files in the Wav-200ms folder have had the decay tail truncated to 200 milliseconds. This shorter truncation level may assist in loading platforms that are bound by sample length ceilings. If you use the full 500 millisecond files and your IR loader throws an error stating that you are attempting to use files that exceed the sample length (note, not the sample rate) limitations, use these files. In addition to this scenario, and the 200 millisecond files could potentially help with CPU usage on less powerful systems or where track and instance counts are high.

WAV-500MS

Files in the Wav-500ms folder exhibit the full, uninhibited decay tail. These files will contain all of the reflective information of sound moving around inside the cabinet, and inside the room. In some instances, minimum phase transformed files in this folder may be slightly more quiet in volume level than those in the 200ms directory, however this is just a side effect of the involved math, and is not a quality factor, just output level. This phenomenon is dependent upon the data inside each unique IR, and is not consistent.

MPT

Files in the "Mpt" folder are minimum phase transformed versions of the 'raw' files in the directory above them. Minimum phase transformation destroys all phase information contained within an IR file, and has a sonic result that may work better or worse for a given situation or taste. Above all, minimum phase transformation achieves a global time and phase alignment for IR's from any source or creator. All non-Mpt'd OwnHammer files are universally time aligned to be 1st party compatible for blending, however if blending with 3rd party content, Mpt'd files will likely be required unless significant time is spent in the parallel time and phase alignment process.

ADDITIONAL PLATFORMS

For additional convenience files with the appropriate sample rate, channel count, and time alignment standard are included for popular external hardware systems. These files are no different from those in the Wav directory structure. In these cases and in these subdirectories, additional text files are included for extended information.