OWNHAMMER

(r)Evolution Series
Impulse Response Libraries

112 DVRB CTS-C12

Information Manual

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ABOUT THIS LIBRARY

THE CABINET

The “112 DVRB” is based on and seeking to recreate the sound of a Fender® Deluxe Reverb® open back 1x12 combo.

THE SPEAKER

The “CTS-C12” is based on and seeking to recreate the sound of an 8-ohm, 1978 Fender® CTS ceramic magnet “Special Design” speaker.

THE CAPTURE CHAIN

This library’s captures were driven by a neutral/reference power amplifier. As such they are ideal for use with accurate modeling platforms and tube amps sent to dummy load + line out devices. No expenses spared mastering grade conversion, cabling, and outboard analog gear were employed throughout.

THE MICS AND MIC MIXES

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

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:

MICS

Auxiliary Placements
“AUX” is a mixture of the MID, REAR, and ROOM captures.
“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.
“ROOM” is comprised of a room placed vintage Neumann® KM84 condenser microphone.

Condenser Microphones
“87” is based on a vintage Neumann® U87.
“414” is based on an AKG® C414 B-ULS. (*available in Mono format/sections only*)

Dynamic Microphones
“57” is based on a modern production Shure® SM57.
“421” is based on a vintage Telefunken®/Sennheiser® MD421-5. (*available in Mono format/sections only*)

Ribbon Microphones

"121" is based on a Royer® R121.

"160" is based on a Beyerdynamic® M160. (*available in Mono format/sections only*)

MIXES

"All" – A single position from each of the microphone category types mixed together.
"Balanced" – A mix where no certain frequency range(s) dominates the spectrum.
"Big" – Contains a large and full bottom end, but without being overly dark.
"Bite1" – Lots of top end teeth.
"Bite2" – Similar to Bite1, but with more body.
"Bold" – Forward midrange with a slightly relaxed top and bottom end.
"Brown" – A more pleasing derivative of the "brown sound", using a similar hardware configuration.
"Chunk" – A more "fat" sounding version of the Bold mix.
"Classic" – A page from classic rock, for those about to rock.
"Cut1" – Very tight low end with a cutting upper midrange.
"Cut2" – Similar to Cut1, but with more body.
"Earth" – Exudes a solid, mellow, warm, earthy tonality.
"Even" – A mix that results in a very flat frequency response, within the context of the given cab/speaker.
"Fat" – Fat with thick lows and low mids, but still retaining clarity and definition.
"Fire" – Burning upper mids with seared edges.
"Forward" – An 'in your face' sound, utilizing a technique that has been used on numerous platinum albums.
"Full" – Retains a very full body without killing the top end, very popular over many years for live use.
"Grit" – Provides excellent clarity and an aggressive, edgy mid range.
"Hair" – Offers a sound with a substantial amount of hair on the top end.
"Hard" – Similar to Forward, but with a harder and more stiff edge to the tonality.
"Lean" – Tight and light on the bottom end, and neatly organized in the mids through the highs.
"Modern" – Even but still modern sounding and somewhat aggressive.
"Olde" – Very reminiscent of the origins of electric recordings: soft, subdued, rich, and full.
"Pocket" – A sound that is right in the pocket for guitar as accompaniment, healthy and even but slightly reserved.
"Rip" – Healthy upper end clarity with a dose of fatness.
"Scoop" – Elevates the top and bottom end, resulting in a slight mid scoop and forward sound.
"Scream" – Rude, aggressive, and a sound that is absolutely refusing to not be heard.
"Smoke" – Slightly dark and hazy sound, with a more transparent rather than spongy midrange.
"Thick" – Very robust, particularly in the lower midrange, while still retaining some upper-mid life.
"Vintage" – Smooth top end with a soft, syrupy midrange with a round bottom end.
"Warm" – Warm and full in the low mids and midrange.

SIMPLE

For those that just want or need the bare essentials, they can be found here. Within the two-mic mix files, the first listed in the pair is the sonically dominant (louder) element to the combination.

SUMMARY

The multi-microphone mix file in the "Summary" folder fits somewhere in the middle of the brightness and darkness scale of the OwnHammer pre-made mix types, and captures the general tonality of the cab and speaker.

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.

ADDITIONAL VOICINGS

In the Quick Start folder, in addition to the traditional entries picked from the Mics and Mixes sections is an exclusive feature: alternate voicings. These voicings are as follows:

Bright (BR) – Accentuates the high end, and can be useful with overly dark guitars, pickups, amps and amp models, cabinets, speakers, etc.

Dark (DK) – Stifles the high end, and can be useful with overly bright guitars, pickups, amps and amp models, cabinets, speakers, etc, as well as in live show context where high decibels and bright sound reinforcement equipment that is made to primarily accent percussion and vocals need counter balancing.

Mid Boost (M+) – Accentuates the midrange, and can be useful in counter balancing bright or scooped amps and amp models, guitars and pickups, bus processing, and/or playback systems – especially PA's at high volumes (similarly to the Dark files). Mid Boost 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.

Mid Cut (M-) – Can be useful in counter balancing muddy or stuffy amps and amp models, guitars and pickups, bus processing, and/or playback systems, especially busy mixes for more industrial sounding music.

Soft Shelves (SS) – Similar to the Mid Cut voicing, but not as extreme of a scoop.

Tight1 (T1) – Tightens up the sound and removes some low mid 'wooliness' to sit more clearly in dense mixes.

Tight2 (T2) – Similar to Tight1, but without sacrificing as much low mid body.

FILE FORMATS

This library contains files in wave audio (.wav) format for use in any convolution reverb loader, be it DAW based hosts or external hardware devices. These files are universally formatted in 44.1 kHz, 48 kHz, and 96 kHz sample rates for both the Mono and TrueStereo segments.

MONO AND TRUESTEREO

Mono files are simply that, single channel files, and are the common, basic format for impulse response files. If in doubt about which will be appropriate in your loader, use these first.

TrueStereo is an OwnHammer original concept, implementation, and market first format. On a technical level, these are stereo format, 2 channel files, where each side is unique but the combined result center pan resolves with a mono center panned source without being lopsided, and does so without introducing strange and fatiguing phase anomalies. For more information on the proprietary OwnHammer TrueStereo format, please see:

ownhammer.com/truestereo

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.

200 MS AND 500 MS FILES

Files in folders that indicate "200 ms" 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, the 200 millisecond files could potentially help with CPU usage on less powerful systems or where track and instance counts are high. 200 ms files are only offered in Mono format.

Files in folders that indicate "500 ms" 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. 500 ms files are offered in both the Mono and TrueStereo format.

Additionally – reverberation information and decay tail length can also affect how "loud" most IR's "play" in IR loaders. Unless an IR loader has an output normalizing function, which most do not, the amount of reflections can inadvertently change the perceived output volume significantly, even though the files are all peak normalized to the same value. The rule of thumb is, the more reverberation: the quieter the file; and vice versa. To this end, an open back 1x12 IR will "play" much louder than a closed back 4x12 IR. A truncated 40 ms file will "play" louder than a full length 500 ms file. An IR that is only frequency and phase with zero reverberation will be drastically louder. Etc. This phenomenon is dependent upon the data inside each unique IR, is not consistent but does follow common patterns, and should be predicted and accommodated for. This may be useful when comparing and auditioning different files, or in wondering why output levels may need to be adjusted in mixing environments.

MPT AND RAW

Files in folders that indicate "MPT" are minimum phase transformed versions of the 'RAW' (unprocessed) files in the directories listed as such. Minimum phase transformation destroys all phase information contained within an IR file, and has a subtle sonic deviation 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 RAW OwnHammer files are universally time aligned to be 1st party compatible for blending, however if blending with 3rd party content, minimum phase transformed files will likely be required unless significant time is spent in the parallel time and phase alignment process.

Throughout the course of operation, OwnHammer has offered two time of flight alignment standards for RAW files, depending upon the date of release. These also translate to different directory structure parent folders to help make identifying them quick and simple. For more information on this topic, please visit:

ownhammer.com/raw-time-of-flight-standards

OEM PLATFORM FILE FORMATS

For information on which of the included file formats is most appropriate for loading into OEM platforms, see the most current list of known devices at:

ownhammer.com/tutorials/file-formats

If the host of your choice is not included in the link above, please refer to their website or documentation.