

SYNCHRO HITS

Kontakt Instrument Manual



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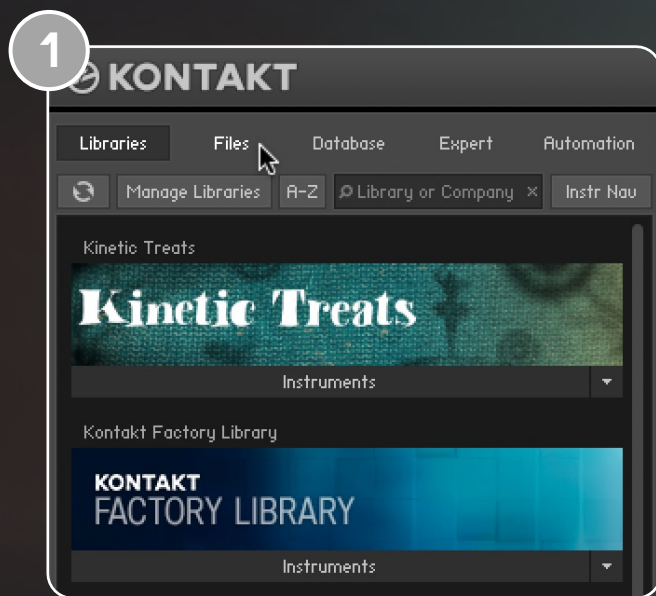
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LOADING SYNCHROHITS INTO KONTAKT

Being a third-party instrument, the instrument files for Synchronhits will not display in Kontakt's default '*Libraries*' menu. Instead, the files must be navigated to manually, using the '*Files*' menu.

This process is outlined in the steps below.

Note: Synchronhits requires the FULL version of Kontakt 6.7.1 or later.



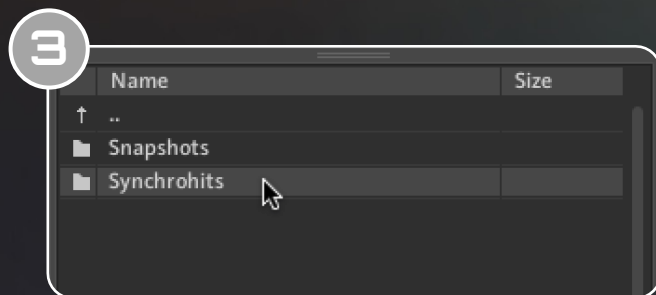
Select the '*Files*' menu, located in the top-left of the Kontakt window.

A file browser will appear below.

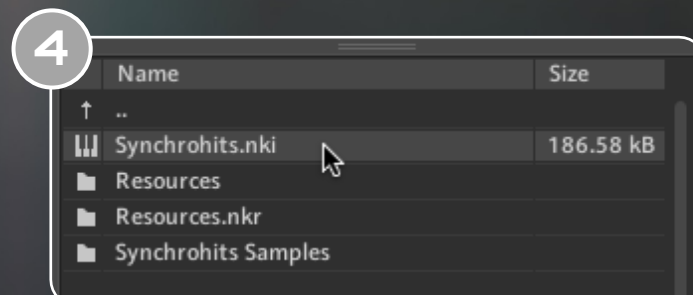


Locate the Synchronhits folder on your drive.

Double-click the folder to reveal its contents in the window below.



Double-click the '*Synchronhits*' folder to reveal its contents.



Double-click the Synchronhits .nki file to load an instance of the instrument into Kontakt.

INTRODUCTION



Information

Synchronhits is a multi-layered instrument for creating cinematic hits in a highly-convenient, automated manner.

After selecting three riser and three hit samples, the Synchronhits engine will automatically determine the playback order and relative offsets required to produce a seamless, synchronous composition.

Included are 123 riser samples and 359 hit samples, all of which can be combined to produce a near-endless number of arrangements.

Features

- Automatic riser sample alignment
- Sync-able filter attack times
- Tempo sync-able hit alignment
- 6 flexible sample playback modules
- Over 1GB of included samples

GUI OVERVIEW

1: Riser 1 Source Control Menu

2: Riser 2 Source Control Menu

3: Riser 3 Source Control Menu

4: Hit 1 Source Control Menu

5: Hit 2 Source Control Menu

6: Hit 3 Source Control Menu

7: Riser 1 Waveform Monitor

8: Riser 2 Waveform Monitor

9: Riser 3 Waveform Monitor

10: Hit 1 Waveform Monitor

11: Hit 2 Waveform Monitor

12: Hit 3 Waveform Monitor

13: Riser Parameter Randomisation Button

14: Hit Parameter Randomisation Button

15: Global Hits Release Slider

16: Riser Filter/Effects Menu Toggle Switches

17: Hit Filter/Effects Menu Toggle Switches

18: Riser Filter/Effects Control Menu

19: Hit Filter/Effects Control Menu

20: Global/Local Effects Menu Toggle

21: Tempo Sync Quantisation Menu

22: Parameter Value Readout Display



COLOURED KEYBOARD NOTATION

When using Synchronhits, Kontakt's graphical keyboard will feature numerous coloured keys. The colour of each key represents its function. The function that each colour represents is shown below.

BLUE

Main sequence triggers (*hold*).

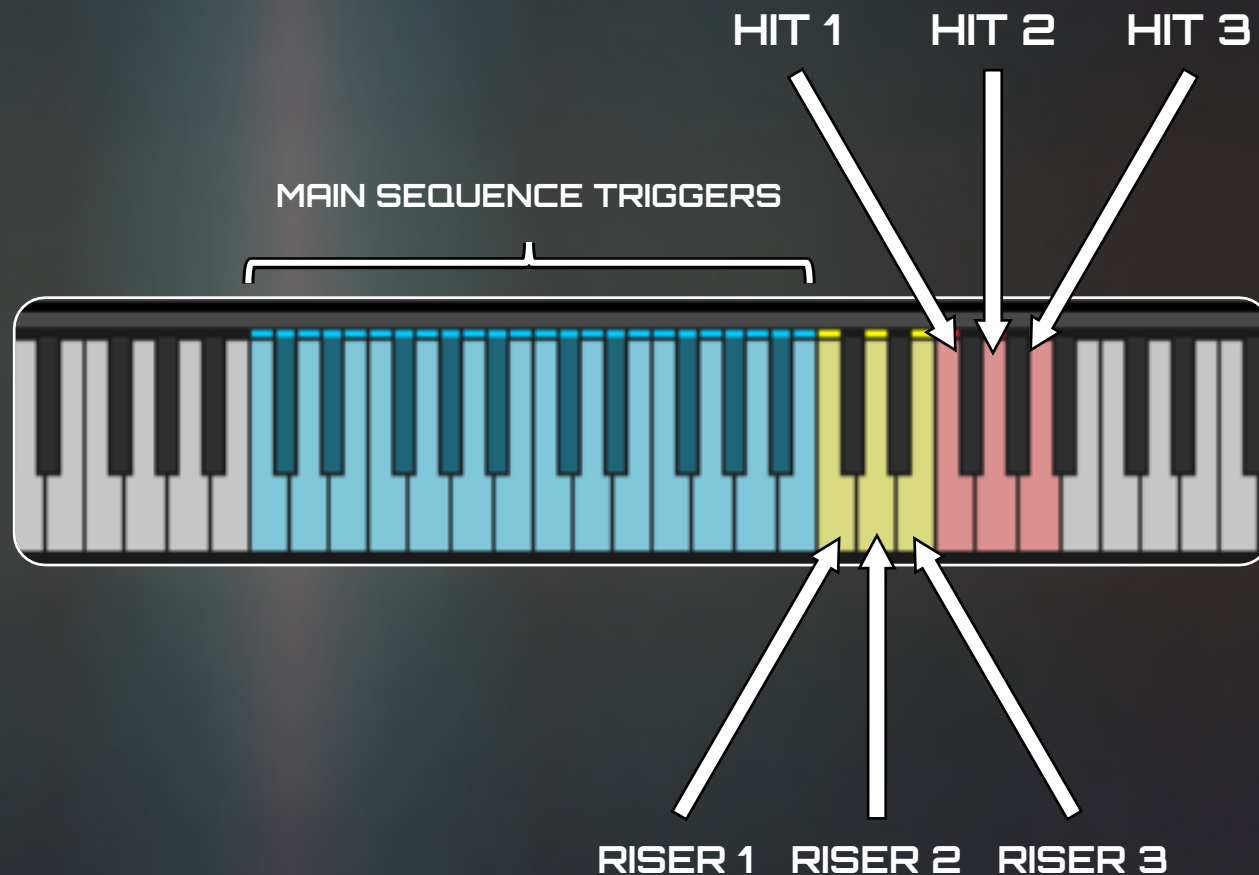
Note: C3 is defined as the central point for sample pitch transpositions.

YELLOW

Instantly play corresponding riser sample (*hold*) — see labels (*right*).

RED

Instantly play corresponding hit sample (*hold*) — see labels (*right*).



RISER/HIT SOURCE CONTROL MENU

The fundamental parameters for each of the six samples can be altered through the use of the riser/hit source control menus.

Each UI element is identified on the image (*seen right*), with a description of its function outlined below.

1: Sample Selection Menu — Used to define the sample to be played back by a specified source. Left and right arrows can be used to iterate through the available samples in order.

2: Sample Source Randomisation Button — When clicked, a random sample from the available list is selected.

3: Volume Dial — Used to control the volume of a given source. (*min: -inf dB, max: +12dB, default: 0dB*)

4: Fine Tuning — Define the tuning of the sample in cents. (*min: -99 cents, max: +99 cents, default: ±0 cents*)

5: Pan Slider — Adjust the stereo distribution of the sample.



6: Semitone Tuning — Alter the tuning of the sample in semitones. (*min: -12 semitones, max: +12 semitones, default: ±0 semitones*)

7: Width Slider — Modify the width of the sample's stereo field.

8: EQ Menu Toggle — When clicked, the displayed UI elements will switch between the controls seen above, and the EQ parameters menu.

RISER/HIT EQ CONTROL MENU

The EQ control menu can be used to both modify the tone of the selected sample, and to establish spectral separation between multiple sample sources.

1: Band 1 Frequency Dial — Define the centre frequency of EQ band 1.

(min: 20Hz, max: 20kHz, default: 112Hz)

2: Band 2 Frequency Dial — Define the centre frequency of EQ band 2.

(min: 20Hz, max: 20kHz, default: 632Hz)

3: Band 3 Frequency Dial — Define the centre frequency of EQ band 3.

(min: 20Hz, max: 20kHz, default: 3.72kHz)

4: Band 1 Gain Dial — Define the gain value of EQ band 1.

(min: -18dB, max: +18dB, default: ± 0.0 dB)

5: Band 2 Gain Dial — Define the gain value of EQ band 2.

(min: -18dB, max: +18dB, default: ± 0.0 dB)



6: Band 3 Gain Dial — Define the gain value of EQ band 3.

(min: -18dB, max: +18dB, default: ± 0.0 dB)

Note: By default, the width of each band is 0.5 Octaves.

RISER/HIT WAVEFORM MONITORS

Playhead



Riser
Waveforms

Hit
Waveforms

Housed at the centre of the window, the riser/hit waveform monitors depict the waveforms for all selected samples. As is outlined in the diagram, the left-sided waveforms represent the riser samples, while the right-sided waveforms portray the hit samples.

The playhead, also pictured left, indicates the playback position of each sample. By nature of Synchrohit's function, each playhead will reach the end of its corresponding waveform at the same time. Following that, the hit samples start to play and the associated playheads begin to portray playback position.

The associated waveform will update when a different sample is chosen using the sample selection menu, scrolling arrows, or randomise button.

RISER/HIT FILTER CONTROL MENU

The filter control menu presents parameters for altering the response of a modulatable filter effect, applied individually to each sample source.

The function of each labelled UI element is described below.

1: Filter Type Selection Menu — Select from 10 different ladder filter shapes:

Low Pass 1 (-6dB/Oct)



Low Pass 2 (-12dB/Oct)



Low Pass 3 (-18dB/Oct)



Low Pass 4 (-24dB/Oct)



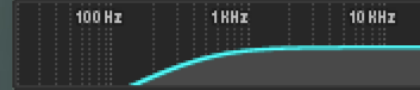
High Pass 1 (-6dB/Oct)



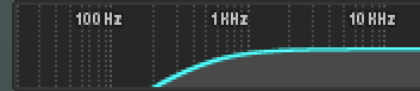
High Pass 2 (-12dB/Oct)



High Pass 3 (-18dB/Oct)



High Pass 4 (-24dB/Oct)



Band Pass 1 (-12dB/Oct)



Band Pass 2 (-24dB/Oct)



2: Filter Sync Toggle — When enabled, the attack time of each filter's envelope is set equal to the length of its parent sample, up to a value of 15 seconds. For samples longer than this value, the attack time will be set to 15 seconds.

3: Filter Sync Reverse Toggle (available only when sync is enabled) — Allows for the filter movement direction to be reversed:

Disabled: Cutoff frequency moves low → high
Enabled: Cutoff frequency moves high → low



4: Filter Cutoff Knob — Defines filter cutoff frequency. (min: 26.0Hz, max: 19.9kHz, default: 26.0Hz)

5: Filter Resonance Knob — Defines filter resonance value. (min: 0%, max: 100%, default: 0%)

6: Filter Modulation Depth Knob (available only when sync is enabled) — Defines modulation intensity; in this case, the filter's movement range. (min: 0%, max: 100%, default: 0%)

RISER/HIT EFFECTS SELECTION MENU



The effects selection menu can be used to modify the settings of three distinct instrument bus effects; reverb, delay and distortion. The parameters of each can be shown by selecting the corresponding label.

Beside each of the labels is an effect bypass toggle switch, used to active/deactivate each effect.

1: Reverb Menu Button —
Displays the reverb parameters menu.

4: Reverb Effect Toggle —
Activates/deactivates the reverb effect. (*Illuminated = effect active*)

2: Delay Menu Button —
Displays the delay parameters menu.

5: Delay Effect Toggle —
Activates/deactivates the delay effect. (*Illuminated = effect active*)

3: Distortion Menu Button —
Displays the distortion parameters menu.

6: Distortion Effect Toggle —
Activates/deactivates the distortion effect. (*Illuminated = effect active*)

Reverb Menu



Delay Menu



Distortion Menu



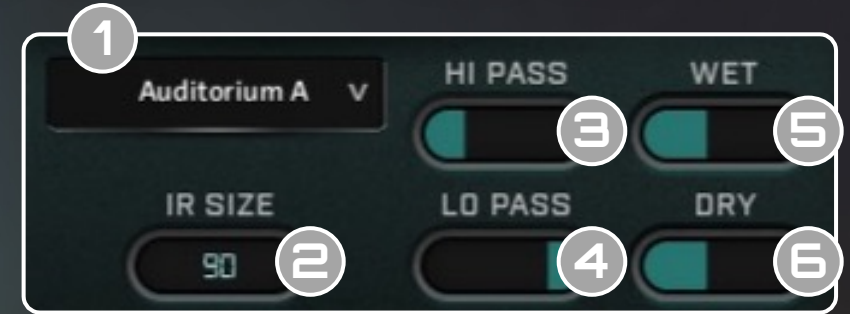
The signal chain between each effect is as follows: Reverb → Delay → Distortion

In the sections that follow, each of the above parameters are explained in depth.

RISER/HIT REVERB SUB-MENU

Synchrohits features a realistic, highly flexible convolution reverb unit, the parameters of which are configurable from this menu.

It should be noted that the internal predelay value is set to 0.0ms. The function of each labelled UI element is described below.



1: Impulse Response Dropdown — Select from 6 different reverb spaces:

Auditorium A (Real Room)
Music Studio A (Real Room)
Tavern Far (Real Room)
L480 Hall 4.3s (Digital Reverb)
L480 Plate 2.6s (Digital Reverb)
Far Away Orven 3.3s (Big Room)

Note: time value suffixes indicate the true length of the impulse response

2: Impulse Response Size — Artificially alters the length of the impulse response. (min: 50%, max: 150%)

Note: Drag to scroll though value range, double click to manually input value

3: High Pass Filter — Defines the cutoff frequency of a high pass filter, applied across the reverb signal.
 (min: 20Hz, max: 20kHz, default: 20Hz)

Note: Slider moves left to right, to mimic the movement of a standard high pass filter (low to high frequency).

4: Low Pass Filter — Defines the cutoff frequency of a low pass filter, applied across the reverb signal.
 (min: 20Hz, max: 20kHz, default: 20kHz)

Note: Slider moves right to left, to mimic the movement of a standard low pass filter (high to low frequency).

5: Wet — Defines the level of the return signal.
 (min: -inf dB, max: 24dB, default: 0.0dB)

6: Dry — Defines the level of the dry signal.
 (min: -inf dB, max: 24dB, default: 0.0dB)

RISER/HIT DELAY SUB-MENU



Based on the Replika delay module, Synchrohits offers a highly configurable, multi-modal, and tempo-syncable delay unit.

The function of each labelled UI element is described below.

1: Mode Selection Dropdown — Select from 5 distinct delay models:

Modern (Clean, transparent)

Analogue (Bucket Bridge delay chip emulation)

Tape (Tape machine emulation)

Vintage (Early digital delay unit emulation)

Diffusion (Larger reverb-like sounds, ideal for ambient sound design)

2: Sync Toggle — Switch between tempo-synced delay times, and absolute delay times.

3: Delay Time Selector — Adjust time between delay repeats. *(defined in milliseconds when sync is disabled, and by note values when sync is enabled)*

4: High Cut Filter — Defines the cutoff frequency of a low pass filter, applied across the delay signal. *(min: 200Hz, max: 20kHz, default: 20kHz)*

Note: Slider moves right to left, to mimic the movement of a standard low pass filter (high to low frequency).

5: Low Cut Filter — Defines the cutoff frequency of a high pass filter, applied across the delay signal. *(min: 200Hz, max: 20kHz, default: 20kHz)*

Note: Slider moves left to right, to mimic the movement of a standard high pass filter (low to high frequency).

6: Feedback — Level of signal fed back into the delay effect, increasing the number of repeats. *(min: 0.00%, max: 120.0%)*

Note: Levels above 100% create unique swelling echoes, up to self-oscillation.

7: Depth — Alters the amount of modulation applied to the delay time. *(min: 0%, max: 100%)*

RISER/HIT DISTORTION SUB-MENU



The distortion menu in Synchronhits makes use of Kontakt's guitar pedal distortion unit, providing a plethora of parameters to aid in creating the perfect sound.

The function of each labelled UI element is described below.

1: Volume — Master output volume.
(min: 0%, max: 100%)

2: Tone — Defines the character of the sound by accentuating certain frequency ranges. (min: 0%, max: 100%)

Note: Low values accentuate low frequencies, high values emphasise high frequencies, and values between cover the middle of the frequency spectrum.

3: Drive — Alters the intensity of the distortion effect. (min: 0%, max: 100%)

4: Bass — Boost/cut the low frequency response. (min: 0%, max: 100%)

Note: Values greater than 50% boost, while values less than 50% cut.

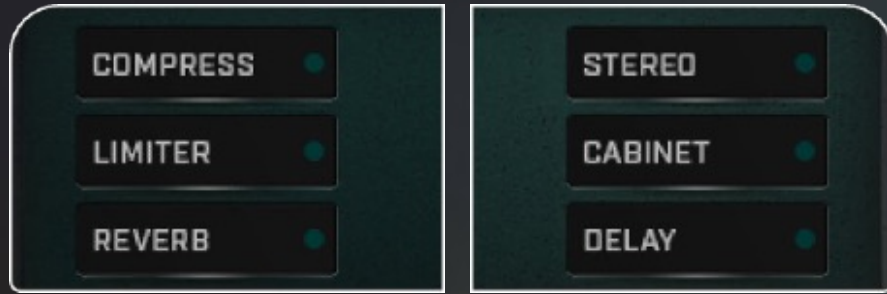
5: Mid — Boost/cut mid frequencies. (min: 0%, max: 100%)

Note: Values greater than 50% boost, while values less than 50% cut.

6: Treble — Boost/cut the high frequency response.
(min: 0%, max: 100%)

Note: Values greater than 50% boost, while values less than 50% cut.

GLOBAL EFFECTS MENU



Synchrohits makes applying the same effects across both the riser and hit groups easy, through the use of the global effects menu (*seen left*).

The menu selection and effect toggle controls function identically to those seen in the local effects selection menu.

Each global effect's sub-menu is shown below.

Compressor



Limiter



Reverb



Stereo Modeller



Cabinet Emulation



Delay



The signal chain between each effect is as follows: Compressor → Limiter → Reverb → Stereo Field → Cabinet Emulation → Delay

GLOBAL EFFECTS SUB-MENUS

COMPRESSOR SUB-MENU



3: Ratio Knob — Determines how much compression is being applied to the signal. (*min: 1:1.0, max: 1:25.0, default: 1:1.0*)

4: Attack Knob — Adjusts the time it takes for the compressor to reach the maximum amount of gain reduction. (*min: 1.0ms, max: 1s, default: 1.0ms*)

1: Compressor Type Selector — Used to alter the character of the compression unit.

2: Threshold Knob — Defines the level at which the compressor will begin working. (*min: -68dB, max: -3.0dB, default: -68dB*)

5: Release Knob — Alters the time it takes for the compressor to stop acting, once the signal drops below the threshold value. (*min: 50.0ms, max: 2.5s, default: 50.0ms*)

6: Output — Controls the output level of the compressor. (*min: -inf dB, max: 24.0dB, default: -inf dB*)

LIMITER SUB-MENU

1: Threshold Knob — Determines the point at which the limiter will begin working. (*min: -40dB, max: 0.0dB, default: -40dB*)

2: Release Knob — Alters the time it takes for the limiter to stop acting, once the signal drops below the threshold value. (*min: 1.0ms, max: 500.0ms, default: 1.0ms*)

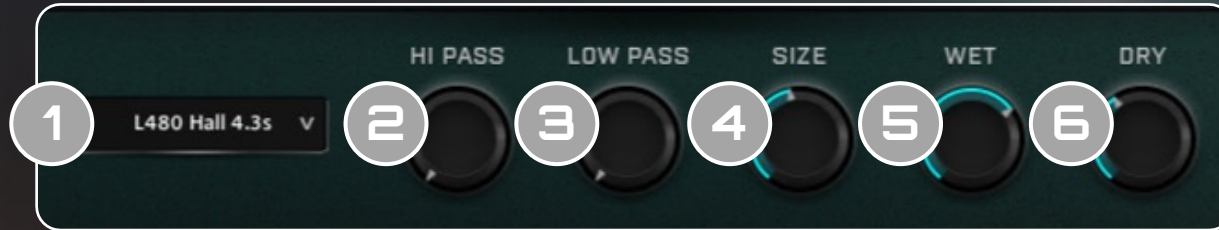
3: Ceiling Knob — Defines the maximum output level of the limiter. (*min: -40.0dB, max: -0.3dB, default: -40.0dB*)



4: Output Knob — Controls the output level of the limiter. (*min: -inf dB, max: 24.0dB, default: -inf dB*)

GLOBAL EFFECTS SUB-MENUS CONT.

REVERB SUB-MENU



1: Impulse Response Dropdown — Select from 6 different reverb spaces. (See page 12 for details)

2: High Pass Filter Cutoff Knob — Defines the cutoff frequency of a high pass filter, applied across the reverb signal. (min: 20Hz, max: 20kHz, default: 20Hz)

3: Low Pass Filter Cutoff Knob — Defines the cutoff frequency of a low pass filter, applied across the reverb signal. (min: 20kHz, max: 20Hz, default: 20kHz)

4: Impulse Response Size — Artificially alters the length of the impulse response. (min: 50%, max: 150%)

5: Wet — Defines the level of the return signal. (min: -inf dB, max: 24dB, default: -inf dB)

6: Dry — Defines the level of the dry signal. (min: -inf dB, max: 24dB, default: -inf dB)

STEREO MODELLER SUB-MENU

1: Spread Knob — Narrow (values < 0%) or expand (values > 0%) the stereo field of the sound. (min: MONO, max: 100.0%, default: MONO)

2: Pan Knob — Adjust the stereo distribution of the sample. (min: 100% left, max: 100% right, default: 100% left)



GLOBAL EFFECTS SUB-MENUS CONT. 2

CABINET EMULATION SUB-MENU



2: Cabinet Size Knob — Allows for the simulation of various cabinet sizes. (*min: 0.0%, max: 100%, default: 0.0%*)

Note: Larger cabinets produce a more prominent bass response; smaller cabinets sound thinner and sharper

3: Size Knob — Defines the level of early room reflections, providing spatial context. (*min: 0.0%, max: 100%, default: 0.0%*)

4: Treble Knob — Boost/cut the high frequency response. (*min: -100.0dB, max: +100.0dB, default: -100.0dB*)

1: Cabinet Type Dropdown — Used to select the specific simulated cabinet sound, from a choice of 11:

- Tweed Green
- Brit 60s
- Chief V-30
- Chief V-30 (Back)
- Tweed Alnico
- Tweed Alnico (Far)
- UK 70s
- UK 70s (Far)
- Bass-WR
- Bass-WR (Horn)
- Leslie 122

5: Bass Knob — Boost/cut the low frequency response. (*min: -100.0dB, max: +100.0dB, default: -100.0dB*)

6: Output Knob — Master output volume. (*min: -inf dB, max: +24.0dB, default: -inf dB*)

DELAY SUB-MENU

1: Delay Time Knob — Adjust time between delay repeats in milliseconds. (*min: 5.0ms, max: 2.9kms, default: 5.0ms*)

2: Damping Knob — Used to reduce the delayed signal's high frequency content. Each repetition sees a progressively greater affect. (*min: 0.0%, max: 100.0%, default: 0.0%*)

3: Pan Knob — Adjust the stereo distribution of the sample. (*min: 100% left, max: 100% right, default: 100% left*)



4: Feedback Knob — Level of signal fed back into the delay effect, increasing the number of repeats. (*min: 0.00%, max: 100.0%, default: 0.0%*)

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- Sound Design: Ergo Kukke
- Scripting: Ross Castledine (Divergent Audio Group)
- Concept: Glyn Lloyd (Divergent Audio Group)
- Interface Design: Glyn Lloyd (Divergent Audio Group)