

Oenkestein Audio

RUMBLE K II PLAYER LIGHT



Operation Manual

RUMBLE K II Player Light Operation Manual

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1 Introduction

1.1 What is Rumble K II Light?

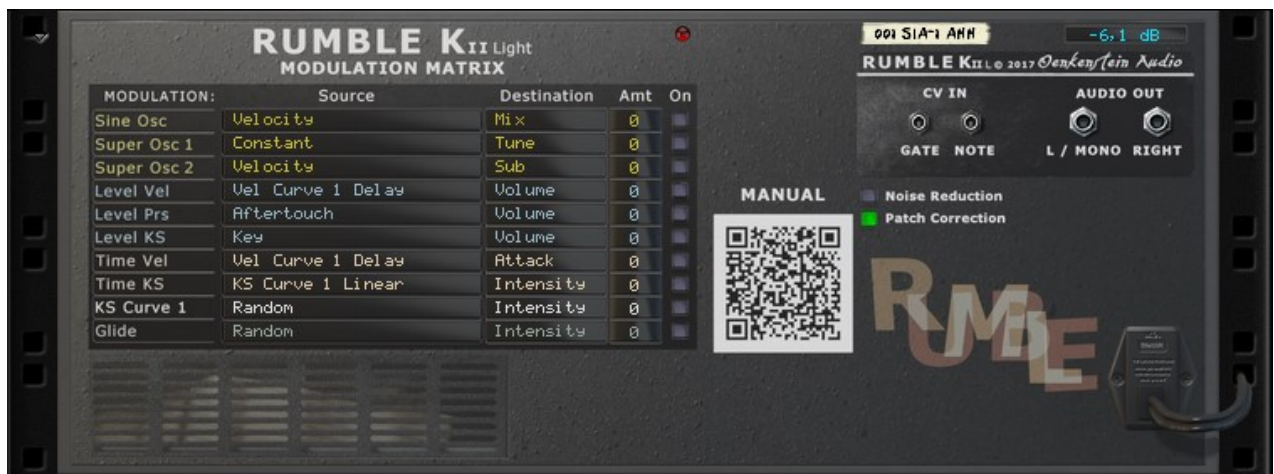
Rumble K II Light is an emulation of an additive wavetable Kawai K1 digital synthesizer from 1985. This Rack Extension mimics the operation system and the naming conventions on a Kawai K1 and also contains all the default patches: 64 single instrument patches and 32 multi instrument patches.

Rumble K II Light is build as a patch or instrument browser. It is basically a rompler, but this version of the Rumble K series has some additions such as Sine, Super and Sub oscillators, a Wave Loop Shaper, an Amp Envelope section with ADSR controls, 7 effects devices and a Modulation Matrix.

Rumble K II Light front panel:



Rumble K II Light back panel:



The Rumble K series derives its name from the legendary guitar 101 hero and inventor of the power chord: Link Wray, who used to poke a pencil in an amplifier speaker to get a gritty, distorted sound.

1.2 About additive wavetable synthesis

Rumble K II Light uses additive wavetable synthesis to generate sounds. The additive synthesis is based on four Wave Loop oscillators that can be introduced in the sound - at various times, levels and durations. The sonic results of additive synthesis can vary dramatically; from standard analog type of synthesizer sounds, via emulations of existing instruments, to extremely complex and animated timbres.

2 Front of the device



2.1 Panels overview

- **Osc panel (1)** with:
 - Wave Loop Preset bank, which holds information about Wave Loops used.
 - 4 oscillator types, each type holding 4 oscillators:
 - Maximum 4 Sine oscillators with Amplitude (AM) or Ring Modulation.
 - Maximum 4 Super oscillators.
 - Maximum 4 Sub oscillators.
 - 4 additive Wave Loop oscillators.
 - Shaper to change the waveforms of the 4 oscillators. Capable of producing distortion and adding harmonics.

The output of each oscillator is then going into panels 2,4,5,6,7,8,9 and 10:

- **Envelope panel (2)** with:
 - Envelope Amount.
 - ADSR.
 - Release Timer to trigger events on note or key release.

The output of the oscillators will then pass the Effects panels.

There are 7 **Effects** Panels:

- **Lofi** panel (4).
- **Overdrive** panel (5).
- **Filter** panel (6).
- **Phaser** panel (7).
- **Delay** panel (8).
- **Rotary** panel (9).
- **Reverb** panel (10).

The output of the oscillators, modulation and the effects will then pass the Output panel.

- **Output panel (3)** with:
 - Octave.
 - Panning.
 - Key Panning.
 - Limiter.
 - High Frequency Correction.
 - Poly Mode.
 - Sustain Pedal Mode.
 - Glide (Portamento).
 - Glide Time.

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- And finally the Master Volume.
- **MIDI Note indicator.**
- **Patch Browser.**

3 Panels

Rumble K II Light is divided in panels, each with one or more sections. A column of buttons, displays or knobs in panels 1 and 2, corresponds with the Sine, Super and Wave Loop oscillator's numbering 1 to 4.

3.1 Panel 1: Osc panel



3.1.1 Section 1: Sine oscillators



The Sine Wave oscillator can be used to reinforce the fundamental or sub-octave of a voice.

- **On / Off** (Sine Osc 1 - 4 On Off): Determines whether a Sine oscillator is added to the signal chain (Scale: On / Off. Default: Off). There are 4 Sine oscillators. Please note: Changing the Sine oscillators Mix, Tune, Key and AM, will change all four Sine oscillators at the same time.
- **Mix** (Sine Osc Mix): Determines the Sine oscillator's volume (Scale: 0 - 100. Default: 0). The Sine oscillators mix alters the overall volume for all the 4 sine oscillators at once.
- **Tune** (Sine Osc Tune): Determines the Sine oscillator's tuning or pitch (Scale: 0 - 100. Default: 53). The tuning of the Sine oscillator is not exactly pitched to middle C. It is out of tune with + 10 cents. Use the sine oscillator as a source for Amplitude (AM) or Ring Modulation.
- **Key** (Sine Osc Key Track On Off): Determines whether the Sine oscillator's tuning should follow the keyboard (Scale: On / Off. Default: On).
- **AM** (Sine Osc Ring Mod On Off): Determines whether the Sine oscillator will perform Amplitude Modulation (or Ring Modulation) with the corresponding Wave Loop oscillator (Scale: On / Off. Default: Off). For example: Turn the AM button and the button for Sine oscillator 3 to on. Wave Loop oscillator 3 now acts as the carrier and gets modulated by Sine oscillator 3. When the modulator is of subsonic frequency, the result is a slow or rapid variation in the volume level of the carrier signal which is referred to as tremolo. The frequency can be changed with the Tune knob.

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3.1.2 Section 2: Super oscillators



The Super oscillator module adds up to 7 detuned sawtooth waves with square wave sub-oscillators to the Wave Loops playback.

- **On / Off** (Super Osc 1 - 4 On Off): Determines whether the Super oscillator is added to the signal chain (Scale: On / Off. Default: Off). There are 4 Super oscillators. Please note: Changing the Super oscillators Mix, Tune, Amt and Detune, will change all four Super oscillators at the same time.
- **Mix** (Super Osc Mix): Determines the Super oscillator's volume (Scale: 0 - 100. Default: 0). The Super oscillators mix alters the overall volume for all the 4 Super oscillators at once.
- **Tune** (Super Osc Tune): Determines the Super oscillator's tuning or pitch (Scale: 0 - 100. Default: 50).
- **Amt** (Super Osc Amount): Determines the number of the sawtooth waves (Scale: 1 - 7. Default: 4).
- **Detune** (Super Osc Detune): Determines the amount of detuning between the sawtooth waves (Scale: 0 - 100. Default: 0).

3.1.3 Section 3: Sub oscillators



The Sub oscillator module adds up to 7 detuned square wave sub-oscillators in combination with the Super oscillator to the Wave Loops playback.

- **Mix** (Super Osc Sub): Determines the Sub oscillator's volume (Scale: 0 - 100. Default: 0). Please note: Changing the Sub oscillators Mix will change all four Sub oscillators at the same time.

3.1.4 Section 4: Wave Loop oscillators



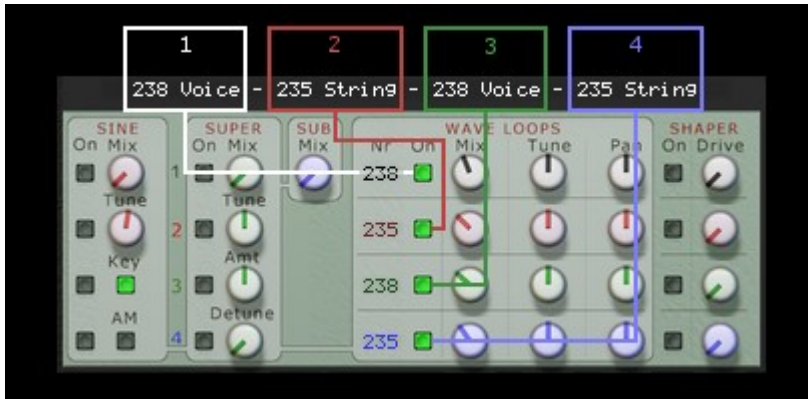
To construct your own sounds, Rumble K II Light provides a Wave Loop Preset bank as a starting point, based on the default instrument patches from a Kawai K1 digital synthesizer from 1985. The

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Wave Loop Preset bank consists of 64 presets. You can choose between the 64 different Wave Loop Presets by loading patches with the Patch Browser (see chapter 6).

Each Wave Loop Preset holds 4 Wave Loop oscillators.

In the example below Wave Loop 1 with number 238 (Voice) is loaded in Wave Loop oscillator 1, Wave Loop 2 with number 235 (String) in Wave Loop oscillator 2 etc.



If you want to turn on Wave Loop oscillator number 1 to 4, click on the corresponding On button.

- **Nr**: Shows the Wave Loop oscillator number (Scale: 1 - 256. Default: Wave Loop 1: 024, Wave Loop 2: 041, Wave Loop 3: 041 and Wave Loop 4: 004)
- **On** (Wave Loop 1 - 4 On Off): Determines whether the Wave Loop oscillator is added to the signal chain (Scale: On / Off. Default: On).
- **Mix** (Wave Loop 1 - 4 Volume): Determines the volume of the Wave Loop oscillator (Scale: ∞ / + 12 dB. Default: ∞ for Wave Loops 1, 2 and 3 and -6 dB, for Wave Loop 4).
- **Tune** (Wave Loop 1 - 4 Tune): Determines the tuning or pitch of the Wave Loop oscillator in semitones (Scale: -36 / +36. Default: 0).
- **Pan** (Wave Loop 1 - 4 Pan): Determines the amount of panning of the Wave Loop oscillator (Scale: 0 - 100. Default: 50).

Overview Wave Loop Preset bank

A Wave Loop Preset has a preset name (004 SiA-2 12 String) and each preset holds 4 Wave Loops as a starting point to construct sounds and instruments: Wave Loop oscillators 1 to 4 (097 Clavi, 057 Digi Bass, 053 F Guitar and 217 F Guitar).

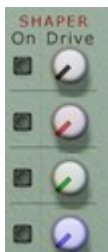
Wave Loop Preset	Wave Loop 1	Wave Loop 2	Wave Loop 3	Wave Loop 4
001 SiA-1 Voice	221 Bowed String	238 Voice	221 Bowed String	238 Voice
002 SiA-1 Ahh	238 Voice	235 String Loop C - 15 C	238 Voice	235 String Loop C - 15 C
003 SiA-2 6 String	216 A Guitar	218 Guitar Harmo	052 A Guitar	100 A Guitar
004 SiA-2 12 String	097 Clavi	057 Digi Bass	053 F Guitar	217 F Guitar
005 SiA-3 String Pad	044 String Pad	235 String Loop C - 15 C	044 String Pad	044 String Pad
006 SiA-3 String Ens	044 String Pad	235 String Loop C - 15 C	044 String Pad	235 String Loop C - 15 C
007 SiA-4 Al's Rhodes	049 E Piano	155 E Piano	049 E Piano	155 E Piano
008 SiA-4 Digi Piano	049 E Piano	095 E Piano 2	096 E Piano 3	154 E Piano
009 SiA-5 Visitors	204 Synth	239 White Noise	169 Tube Bell	238 Voice Loop
010 SiA-5 Return Home	237 Pan Flute	238 Voice Loop	237 Pan Flute	238 Voice Loop
011 SiA-6 Pan Flute	064 Panflute	065 Harmonica	231 Pan Flute Attack	237 Pan Flute
012 SiA-6 Flute	063 Flute	001 Sinus C3	001 Sinus C3	237 Pan Flute
013 SiA-7 Trumpet	082 Trumpet	083 Trumpet	083 Trumpet	228 Trumpet
014 SiA-7 French Horn	024 Saw 11	041 French Horn Brass	041 French Horn Brass	004 Sinus C5
015 SiA-8 Gong of Kings	239 White Noise	255 Crash Alt	123 Bell	255 Crash Alt
016 SiA-8 1 Key Beat	205 Bass Drum	207 Tight Snare	211 H Hat	211 H Hat
017 SiB-1 Sitar	217 F Guitar	176 Sitar 1	177 Sitar 2	125 Sitar
018 SiB-1 Kimono	201 Koto	175 Koto	124 Koto	124 Koto
019 SiB-2 Piano 1	089 Piano 4	225 Piano	087 Piano 2	227 Piano Noise
020 SiB-2 Piano 2	090 Piano 5	088 Piano 3	087 Piano 2	227 Piano Noise
021 SiB-3 Jazz Harp	200 Harp	068 Harp	068 Harp	174 Harp E
022 SiB-3 Saxy	147 Brass	239 White Noise	078 Brass	080 Brass

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023 SiB-4 Fuzz Clav	097 Clavi	156 Clavi	097 Clavi	156 Clavi
024 SiB-4 Harpsicord	157 Harpsicord 1	158 Harpsicord 2	098 Harpsicord	098 Harpsicord
025 SiB-5 Jazz Organ	072 Jazz Organ	072 Jazz Organ	003 Sinus G	006 Sinus G5
026 SiB-5 Deep Purple	139 Pipe Organ	139 Pipe Organ	139 Pipe Organ	239 White Noise
027 SiB-6 Clarinet	116 Clarinet 1	117 Clarinet 2	116 Clarinet 1	184 Pipe Organ 3 -2 C
028 SiB-6 Oboe	001 Sinus C3	118 Oboe	033 Square 1	099 Vibe
029 SiB-7 Bowed String	221 Bowed String	018 Saw 5	235 String Loop C - 15 C	018 Saw 5
030 SiB-7 Cellos	235 String Loop C - 15 C	048 E Piano	222 String Attack	046 El Grand
031 SiB-8 Pizzicato	224 Pizzicato	014 Saw 1	237 Pan Flute	014 Saw 1
032 SiB-8 Orchestra	235 String Loop C - 15 C	149 Orchestra	149 Orchestra	168 Tine
033 SiC-1 Stratocast	214 Strat Guitar C -35 C	219 Pull Bass	103 Strat 2	102 Strat 1
034 SiC-1 Steel Keys	036 Square 4	101 F Guitar	216 A Guitar	034 Square 2
035 SiC-2 Strut and Stuf	058 Pick Bass	213 Ride	238 Voice Loop	063 Flute
036 SiC-2 Club Piano	089 Piano 4	225 Piano	087 Piano 2	227 Piano Noise
037 SiC-3 Analog Brass	016 Saw 3	033 Square 1	018 Saw 5	018 Saw 5
038 SiC-3 Nasty Brass	027 Saw 14	025 Saw 12	027 Saw 14	025 Saw 12
039 SiC-4 Crocketts	226 El Grand	235 String Loop C - 15 C	235 String Loop C - 15 C	226 El Grand
040 SiC-4 Jan his Theme	174 Harp E	033 Square 1	238 Voice Loop	204 Synth
041 SiC-5 Reflection	033 Square 1	033 Square 1	235 String Loop C - 15 C	123 Bell
042 SiC-5 Ole	052 A Guitar	217 F Guitar	238 Voice Loop	235 String Loop C - 15 C
043 SiC-6 Heavy Hitter	226 El Grand	235 String Loop C - 15 C	235 String Loop C - 15 C	239 White Noise
044 SiC-6 Aftertouch	238 Voice Loop	186 Synth 2 Dis -26 C	236 Shakuhachi C - 18 C	238 Voice Loop
045 SiC-7 Terminator	237 Pan Flute	236 Shakuhach C - 18 C	231 Pan Flute Attack	254 H Hat Alt
046 SiC-7 Dragon Hall	237 Pan Flute	237 Pan Flute	237 Pan Flute	237 Pan Flute
047 SiC-8 Nomads	221 Bowed String	255 Crash Alt	235 String Loop C - 15 C	231 Pan Flute Attack
048 SiC-8 Arrangement	238 Voice Loop	235 String Loop C - 15 C	238 Voice Loop	235 String Loop C - 15 C
049 SiD-1 Ac Bass	055 Ac Bass 1	056 Ac Bass	104 Ac Bass	224 Pizzicato
050 SiD-1 Kick Bass	057 Digi Bass	226 El Grand	205 Bass Drum	216 A Guitar
051 SiD-2 Electric Bass	057 Digi Bass	105 Pull Bass 1	224 Pizzicato	216 A Guitar
052 SiD-2 Pull Bass	105 Pull Bass 1	219 Pull Bass	106 Pull Bass 2	059 Digi Bass
053 SiD-3 Marimba	076 French Horn	129 Steel Drum 1	203 Marimba C + 45 C	001 Sinus C3
054 SiD-3 Vybes	159 Vibe Dis + 2 C	051 Vibe	099 Vibe	099 Vibe
055 SiD-4 Glocken	164 Glocken 1 E + 15 C	164 Glocken 1 E + 15 C	066 Glocken	167 Tine 2 Fis + 35 C
056 SiD-4 Bellery	182 Steel Drum Ais + 13 C	001 Sinus C3	182 Steel Drum Ais + 13 C	001 Sinus C3
057 SiD-5 Steeldrums	182 Steel Drum Ais + 13 C	129 Steel Drum 1	130 Steel Drum 2	002 Sinus C
058 SiD-5 Music Box	218 Guitar Harmo	067 Tine	168 Tine	121 Oriental Bell
059 SiD-6 Kick and Snare	205 Bass Drum	206 Ac Snare	211 H Hat C	212 Crash C
060 SiD-6 Kick and E Snare	205 Bass Drum	208 E Snare	234 White Noise	208 E Snare
061 SiD-7 A Tom and Hi Hat	211 H Hat	211 H Hat	210 Ac Tom	239 White Noise
062 SiD-7 E Tom and Hi Hat	211 H Hat	211 H Hat	210 Ac Tom	239 White Noise
063 SiD-8 Ahh	001 Sinus C3	235 String Loop C - 15 C	238 Voice Loop	235 String Loop C - 15 C
064 SiD-8 Cymbals	212 Crash	213 Ride	213 Ride	123 Bell

* Wave Loops without mentioning a note like Ais or Dis behind their name are all tuned C3. Some Wave Loop names like '186 Synth 2 Dis -26 C' have a number behind their name followed by a capital 'C'. The number indicates the Fine Tune correction needed measured in Cents (-26) to make the Wave Loop sound in tune with the Wave Loop's names note (Dis). The Fine Tune of a Wave Loop can be changed with the Combinators Programmer (see also Chapter 7).

3.1.5 Section 5: Shaper



This is a very powerful sound shaping tool, providing fully customizable wave shaping, capable of producing distortion and harmonics. The Shaper in Rumble K II Light has a sine curve:

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- **On / Off** (Osc 1 - 4 Shaper On Off): Determines whether the Shaper is added to the signal chain (Scale: On / Off. Default: Off).
- **Drive** (Osc 1 - 4 Shaper Drive): Determines the amount of waveshaping. More drive, more waveshaping / distortion. The Shaper has a heavy output if you turn it On or Off, as no automatic gain reduction is applied. Set or decrease the Wave Loop volume or mix by hand, when the Shaper Drive is increased. To avoid a sudden increase in volume when the Shaper is turned On, the Shaper Drive is set to 0 as default (Scale: 0 - 100. Default: 0).

3.2 Panel 2: Envelope panel



- **Amt** (Osc 1 - 4 Envelope Amount). Determines the amount the amp envelope affects the Wave Loop (Scale: 0 - 100. Default: 100).
- **Att** (Osc 1 - 4 Envelope Attack). Determines the time that a sound takes to peak (Scale: 0 - 100. Default: 0).
- **Dec** (Osc 1 - 4 Envelope Decay). Determines the time that the sound takes to fall from the peak to the sustain level (Scale: 0 - 100. Default: 100). Some Wave Loops produce a short click when the Decay is set to 0. When the Decay is set to 0,4 %, the click will be gone.
- **Sus** (Osc 1 - 4 Envelope Sustain). Determines the volume (relative to the peak) when the key is held down (Scale: ∞ / 0 dB. Default: 0 dB).
- **Rel** (Osc 1 - 4 Envelope Release). Determines the time the sound takes to die out after the key is released (Scale: 0 - 100. Default: 49,9).
- **Timer** (Osc 1 - 4 Release Timer). Used as a modulation source for attenuation of release-triggered voices depending on how long the note was held (Scale: 0 - 100. Default: 0).

Example of the Release Timer as a source in the Modulation Matrix on the back panel:

MODULATION MATRIX				
MODULATION:	Source	Destination	Amt	On
Sine Osc	Release Timer	Mix	80	<input checked="" type="checkbox"/>
Super Osc 1	Constant	Tune	0	<input type="checkbox"/>

The result: All the active Sine Oscillators will be played as a note is released.

3.3 Panel 3: Output panel



3.3.1 Section 1: Output

- **Oct** (Octave). Determines the amount of tuning in octaves (Scale: -3 / +3. Default: 0).
- **Pan** (Pan). Determines the panning of the output (Scale: 0 - 100. Default: 50).
- **Vol** (Volume). Determines the master volume (Scale: ∞ / + 12,0 dB. Default: - 6,1 dB).
- **Poly** (Poly Mode On Off). Select On if you want to play Rumble K II Light polyphonically. The maximum number of voices is 64. Select Off, if you want to play Rumble K II Light in monophonic mode and retrigger the envelopes as soon as you play a new note (Scale: On / Off. Default: On).
- **Key** (Key Pan On Off). Determines whether the panning should follow the keyboard scaling. When On, notes played in the lower range will output to the left channel. Notes in the higher range will output to the right channel (Scale: On / Off. Default: Off).

Please note: In the Output section, enabling the “Key” setting yields a perfect L/R balance on Bb2 (A#2) instead of C3, or D#3 (which is middle note of the MIDI range). It is possible to correct the amount of semitones to get a more balanced panning across the keyboard in the Modulation Matrix when Key Panning is set to On: In one of the 3 Level slots or busses (Level Vel, Level Prs and Level KS), set Key as source, set Pan as destination and a correction value as Amount.

Level Vel	Key	Pan	3	<input checked="" type="checkbox"/>
Level Prs	Aftertouch	Volume	0	<input type="checkbox"/>
Level KS	Key	Volume	0	<input type="checkbox"/>

- **Lim** (Limiter On Off). Turns the Limiter in soft mode On or Off. The release time of this soft limiter is set to 10 seconds. The Limiter is used to keep voice levels in check - e.g. when very high filter resonance is used (Scale: On / Off. Default: Off).
- **Pedal** (Sustain Pedal Mode) Switches the Sustain Pedal Mode: Off, On, Latch (sustain notes until the next note is played) or Damper. In Damper mode, sustained voices are not released while either the sustain pedal or the key that triggered the voice are held. In the normal "On" mode, sustained voices are released when the sustain pedal is lifted regardless of whether the key that triggered the voice has been held again (Scale: Off / On / Latch / Damper. Default: On).
- **HF** (HF Correction On Off). This corrects for high frequency loss due to sample playback interpolation (Scale: On / Off. Default: Off).

3.3.2 Section 2: Glide

- **Glide** (Glide Mode). Switches pitch glide Off, On or Auto (only glides if a key is already held). Glide or Portamento makes note pitch glide from previous notes to new ones, at the time set with the Time knob. Default is Off. Glide can be used in both Poly Modes:
 - When Off there will be no glide.
 - When On or Auto the pitch will glide between consecutive notes.
- **Time** (Glide Time). The time it takes to glide from one note to the next (Scale: 0 - 100. Default: 0). When Glide Time is set to 0 the glide is turned off and thus modulation in the Modulation Matrix has no effect as well. Glide or its modulation will occur when the Glide Time value is set to 1 or higher (Zero = No glide, 1 = Start point of the Glide Time).

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3.4 Panel 4: Lofi panel



A simple effect for emulating degraded audio quality (downsample / ratecrusher).

- **On / Off** (Lofi On Off). Determines whether degraded audio quality is added to the signal chain (Scale: On / Off. Default: Off).
- **Rate** (Lofi Sample Rate). Determines the downsampling rate (Scale: 0 - 100. Default: 50).
- **Jitter** (Lofi Jitter). Determines the random modulation of downsampling rate (Scale: 0 - 50. Default: 0).
- **Mix** (Lofi Mix). Determines the amount of downsampling (Scale: 0 - 100. Default: 100).

3.5 Panel 5: Overdrive panel

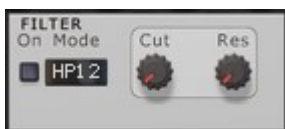


A (mono) overdrive effect with effect algorithms taken from the Scream 4 device.

- **On / Off** (Overdrive On Off). Determines whether overdrive is added to the signal chain (Scale: On / Off. Default: Off).
- **Drive** (Overdrive Drive). Determines the amount of overdrive (Scale: 0 - 100. Default: 50).
- **Tone** (Overdrive Tone). Determines the tone of the overdrive. Turn clockwise for a brighter sound. (Scale: 0 - 100. Default: 50).
- **Presence** (Overdrive Presence). Determines the presence of the overdrive. Presence boosts frequencies in the high midrange. Turn clockwise for more presence boost (Scale: 0 - 100. Default: 50).
- **Mode** (Overdrive Mode). Determines the overdrive mode (Scale: Drive, Scream, Fuzz. Default: Drive).
 - Drive produces an analog-type overdrive effect.
 - Scream is similar to fuzz, but with a bandpass filter with high resonance and gain settings placed before the distortion stage. The Tone knob controls the basic tone of the scream effect and the Presence knob controls the filter frequency. The high resonance setting of the filter makes it suitable for wah-wah effects.
 - Fuzz produces a bright and distorted sound even at low drive settings.

Please note: When the Overdrive in the Effects panel is turned to On, the output signal will change from stereo to mono. This results in a different behaviour for the Oct(ave), Pan(ning) and Key (Pan On Off) on the Output panel: The Octave should be manually shifted one octave lower to play notes above B4, Pan(ning) will not produce any output on the right channel and the Key Pan will not work, although it is turned on.

3.6 Panel 6: Effects filter panel



- **On / Off** (High Low Pass Filter On Off). Determines whether effects filter is added to the signal chain (Scale: On / Off. Default: Off).
- **Mode** (High Low Pass Filter Mode). Determines the effects filter mode. You can choose between a 12 dB/oct and 24 dB/oct lowpass filter as well as the LP+ filter, which is a “brickwall”

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lowpass filter with very steep roll-off. There is also a 6 dB/oct bandpass filter, a 12 dB/oct highpass filter and the “brickwall” HP+ filter. Note that the LP+ and HP+ filter types do not feature Resonance control (Scale: LP / LP 24 / LP+ / BP6 / HP12 / HP+. Default: HP12).

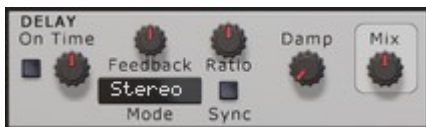
- **Cut** (High Low Pass Filter Cutoff). Determines the amount of the effects filter cutoff (Scale: 0 - 100. Default: 0).
- **Res** ((High Low Pass Filter Resonance). Determines the amount of the effects filter resonance (Scale: 0 - 100. Default: 0).

3.7 Panel 7: Phaser panel



- **On / Off** (Phaser On Off). Determines whether the phaser is added to the signal chain (Scale: On / Off. Default: Off).
- **Rate** (Phaser Rate). Determines the modulation rate of the phaser (Scale: 0 - 100. Default: 50).
- **Depth** (Phaser Depth). Determines the depth of the phaser (Scale: 0 - 100. Default: 50).
- **Fback** (Phaser Feedback). Determines the amount of feedback (Scale: 0 - 100. Default: 50).
- **Center** (Phaser Center). Determines the center filter frequency of the phaser (Scale: 0 - 100. Default: 50).
- **Spread** (Phaser Spread). Determines the offset between left and right center frequencies (Scale: 0 - 100. Default: 50).
- **Mix** (Phaser Mix). Determines amount of phaser added to the signal chain (Scale: 0 - 100. Default: 50).

3.8 Panel 8: Delay panel



- **On / Off** (Delay On Off). Determines whether the delay is added to the signal chain (Scale: On / Off. Default: Off).
- **Time** (Delay Time). Determines the delay time, depending of the Sync mode (Scale: 1 - 100. Default: 50, or 1 second).
- **Feedback** (Delay Feedback). Determines the amount of delay feedback (Scale: 1 - 100. Default: 50).
- **Mode** (Delay Feedback Mode). Determines which channel(s) feedback is taken from (Scale: Stereo / Cross / Left / Right. Default: Stereo).
- **Ratio** (Delay Ratio). Determines the ratio of the delay. A value ranging from 1 to 49 reduces the left channel delay, a value ranging from 51 to 100 reduces the right channel delay (Scale: 1 - 100. Default: 50).
- **Sync** (Delay Sync On Off). Determines the synchronisation of the delay. Sets the Time to seconds which is default or to quarternote beats (Scale: On / Off. Default: Off).
- **Damp** (Delay Damping). Determines the amount off damping (Scale: 1 - 100. Default: 1).
- **Mix** (Delay Mix). Determines the amount delay mixed with the original sound (Scale: 0 - 100. Default: 50).

3.9 Panel 9: Rotary panel



The Rotary is an emulation of a Leslie rotary speaker cabinet.

3.9.1 Section 1: Rotary

- **On / Off** (Rotary On Off). Determines whether rotary is added to the signal chain (Scale: On / Off. Default: Off).
- **Speed** (Rotary Speed). Determines rotary speed amount (Scale: Stop, Slow, Fast. Default: Slow).
- **Horn Acc** (Rotary Horn Acceleration). Determines the rotary acceleration and deceleration speed of the horn (Scale: 0 - 100. Default: 60).
- **Slow** (Rotary Horn Slow). Determines the rotation speed of the horn at "Slow" speed (Scale: 0 - 100. Default: 50).
- **Fast** (Rotary Horn Fast). Determines the rotation speed of the horn at "Fast" speed (Scale: 0 - 100. Default: 94).
- **Amp** (Rotary Horn Amp Mod). Determines the amplitude modulation of the horn signal (Scale: 0 - 100. Default: 50).
- **Bas Acc** (Rotary Bass Acceleration). Determines the rotary bass acceleration and deceleration speed (Scale: 0 - 100. Default: 25).
- **Slow** (Rotary Bass Slow). Determines the rotation speed of the bass at "Slow" speed (Scale: 0 - 100. Default: 55).
- **Fast** (Rotary Bass Fast). Determines the rotation speed of the bass at "Fast" speed (Scale: 0 - 100. Default: 91).
- **Amp** (Rotary Bass Amp Mod). Determines the amplitude modulation of the bass signal (Scale: 0 - 100. Default: 50).

3.9.2 Section 2: Overall

- **Freq** (Rotary Horn Freq Mod). Determines the frequency modulation of the horn signal (Scale: 0 - 100. Default: 50).
- **X - Over** (Rotary Crossover). Determines the crossover frequency between bass and horn (Scale: 0 - 100. Default: 50).
- **Bal** (Rotary Balance). Determines the volume balance between bass and horn (Scale: 0 - 100. Default: 50).
- **Mic** (Rotary Mic Angle). Determines the simulated microphone angle towards the simulated rotary speaker cabinet (Scale: 0 - 100. Default: 50).

3.10 Panel 10: Reverb panel



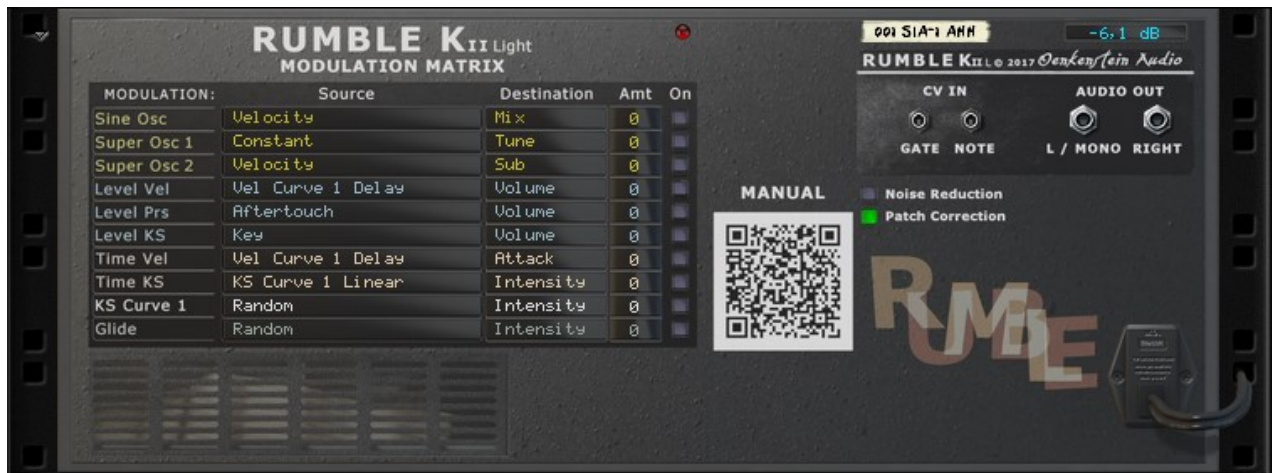
This is an algorithmic reverb emulating a digital reverb unit. It sounds almost similar to the RV-7 Reverb (Hall).

- **On / Off** (Reverb On Off). Determines whether reverb is added to the signal chain (Scale: On / Off. Default: Off).
- **Time** (Reverb Time). Determines the length of reverb tail (Scale: 0 - 100. Default: 50).
- **P Del** (Reverb Pre Delay). Determines the initial delay before reverb (Scale: 0 - 1000. Default: 283).
- **H Cut** (Reverb High Cut). Determines the high pass filter cutoff frequency (Scale: 0 - 100. Default: 0).
- **L Cut** (Reverb High Cut). Determines the low pass filter cutoff frequency (Scale: 0 - 100. Default: 0).

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- **Damp** (Reverb Damping). Determines the progressive loss of high frequencies in the reverb tail (Scale: 0 - 100. Default: 0).
- **Mix** (Reverb Mix). Determines the amount of reverb mixed with the original sound (Scale: 0 - 100. Default: 50).

4 Back of the device



4.1 Volume Control

When routing cables the volume control can be altered by changing the dB value in the volume display.

4.2 Sequencer Control Inputs

The Sequencer Control CV and Gate inputs allow you to play Rumble from another CV/Gate device (typically a Matrix or an RPG-8). The signal to the CV input controls the note pitch, while the signal to the Gate input delivers note on / off along with velocity.

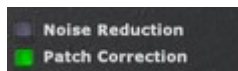
4.3 Audio Output

These are the main audio outputs. When you create a new Rumble device, these outputs are auto-routed to the first available channel in the Reason main mixer.

4.4 Manual QR Code

Downloads the "Rumble K II Light Operation Manual.pdf" from www.oenkenstein.nl.

4.5 Noise Reduction / Patch Correction



4.5.1 Noise Reduction On / Off

Determines whether noise reduction is applied to the signal chain (Scale: On / Off. Default: Off). The Kawai K1 has low quality 8 bit short cycled samples and as they were recorded on tape before the analogue to digital conversion, some noise was added. Noise Reduction is a Low Pass 12 Filter centred at 9 kHz and follows the keyboard.

4.5.2 Patch Correction On / Off

When loading .repatch patches and the Patch Correction is turned On, the sound of the current patch triggered by sustained note input will be muted while the next patch is loading (Scale: On / Off. Default: On). Please note: The status of the Patch Correction is not included when a .repatch or .cmb file is saved.

When Patch Correction is turned Off, changing .repatch files in the Patch Browser while notes are sustained may cause a sudden jump in volume and will play the oscillators from the old patch with the settings of the new patch. The change disappears when a new note is triggered.

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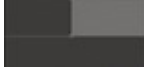
4.6 Modulation Matrix

Rumble K II Light has a Modulation Matrix with 10 modulation slots or busses, each with 24 sources.

MODULATION MATRIX				
MODULATION:	Source	Destination	Amt	On
Sine Osc	Velocity	Mix	0	<input type="checkbox"/>
Super Osc 1	Constant	Tune	0	<input type="checkbox"/>
Super Osc 2	Velocity	Sub	0	<input type="checkbox"/>
Level Vel	Vel Curve 1 Delay	Volume	0	<input type="checkbox"/>
Level Prs	Aftertouch	Volume	0	<input type="checkbox"/>
Level KS	Key	Volume	0	<input type="checkbox"/>
Time Vel	Vel Curve 1 Delay	Attack	0	<input type="checkbox"/>
Time KS	KS Curve 1 Linear	Intensity	0	<input type="checkbox"/>
KS Curve 1	Random	Intensity	0	<input type="checkbox"/>
Glide	Random	Intensity	0	<input type="checkbox"/>

- Modulation:** Describes the items to modulate. In the Modulation Matrix you can alter parameters for both the Sine and Super oscillators and all the 4 Wave Loop oscillators at once. There are 9 items you can modulate:
 - Sine Osc (1 slot).
 - Super Osc (2 slots).
 - Envelope Level (3 slots).
 - Envelope Time (2 slots).
 - Keyboard Scaling (KS) Curve 1 (1 slot).
 - Output Glide (1 slot).

- Source:** Sets the source of the item to modulate. There are 24 different sources.

- Constant
- Random
- Random +
- Pitch Bend
- Aftertouch
- Mod Wheel
- Key
- Velocity
- Release Timer
- Filter Envelope
- Amp Envelope
- Glide Curve
- Vibrato
- Note Bend
- KS Curve 1 Linear
 
- KS Curve 2 Concave
 
- KS Curve 3 Convex
 
- KS Curve 4 Ramp
 
- KS Curve 5 Square
 

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- Vel Curve 1 Delay



- Vel Curve 2 Delay Ramp



- Vel Curve 3 Convex Sinus



- Vel Curve 4 Ramp Sinus



- Vel Curve 5 Decay



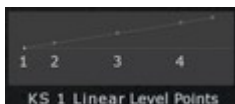
- **Destination:** Sets the destination of the item to modulate.
- **Amount:** Determines the amount of modulation (Scale: - 100 / +100. Default: 0). Time Vel and Time KS have a minimum value of 0 and a maximum of 100.
- **On / Off.** Determines whether modulation is added to the signal chain (Scale: On / Off. Default: Off).

Please note: Wave Loop oscillators 1 to 4 with a Wave Loop number higher than 205 have their Wave Loop Mode set to Off internally. If one or both the envelope time slots (Time Vel and Time KS) are used on these Wave Loops, they may affect the timing of the Amp Envelope's Attack and Decay.

4.7 Modulation

4.7.1 Curves

The curves (see section 4.6) are used as sources to alter destinations in the Modulation Matrix. The KS (Keyboard Scale) and Vel (Velocity) curves are almost similar to those on a Kawai K1. One curve can be shaped in the Modulation Matrix: The KS 1 Linear Curve has four Level Points. A point holds information about the linear curves level and time.



4.7.2 Modulation Wheel

The Mod Wheel can be used for controlling almost any parameter in Rumble K II Light. For example: Use the Mod(ulation) Wheel as a Source parameter in the Modulation Matrix and route it to the desired Destination parameter(s) with a certain Amount.

MODULATION MATRIX				
MODULATION:	Source	Destination	Amt	On
Sine Osc	Mod Wheel	Mix	100	■
Super Osc 1	Mod Wheel	Tune	24	■
Super Osc 2	Mod Wheel	Sub	100	■
Level Vel	Mod Wheel	Volume	-25	■
Level Prs	Mod Wheel	Pan	-100	■
Level KS	Mod Wheel	Tune	12	■
Time Vel	Mod Wheel	Attack	50	■
Time KS	Mod Wheel	Attack	100	■
KS Curve 1	Mod Wheel	Intensity	2	■
Glide	Mod Wheel	Intensity	12	■

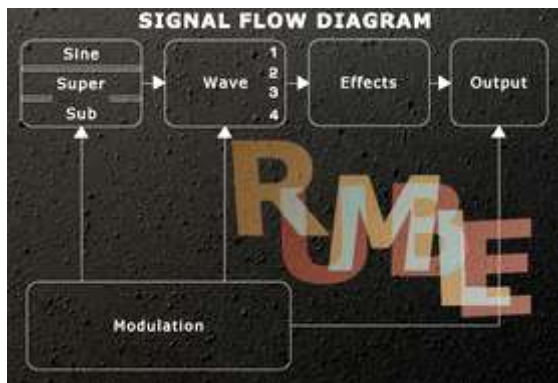
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4.7.3 Random

You can make weird routings on almost all the internal functions of Rumble K II Light: In the next example all Sources are triggered at Random:

MODULATION MATRIX				
MODULATION:	Source	Destination	Amt	On
Sine Osc	Random	Mix	100	■
Super Osc 1	Random +	Tune	100	■
Super Osc 2	Random	Sub	-100	■
Level Vel	Random	Volume	52	■
Level Prs	Random	Pan	49	■
Level KS	Random	Tune	12	■
Time Vel	Random	Attack	89	■
Time KS	Random	Intensity	22	■
KS Curve 1	Random	Time 3	66	■
Glide	Random	Intensity	0	■

5 Signal Flow



The Mix output of the Sub and Super oscillators are connected, sums independently from the Sine oscillator into the Wave Loop Mix.

The Mix output of the Sine oscillator goes into the Wave Loop Mix.

* If you change the Mix knob on one of the four Wave Loop oscillators, the overall volume of Sine-, Super- and Sub oscillators will change as well.

The Sine, Super and Sub oscillators are also affected by the Shapers Drive.

The sum of Osc panel will pass through the Envelope panel.

The audio signal will then go through the 7 effects panels, the Lofi panel, the Overdrive panel, the Filter panel, the Phaser panel, the Delay panel, the Rotary panel and the Reverb panel before it goes into the final stage, the Output panel.

The Modulation Bus signal output only affects the destination chosen on the panel and alters the audio signal of all the 4 Wave Loop oscillators at once. There are no modulation sources and destinations for the Effects panels.

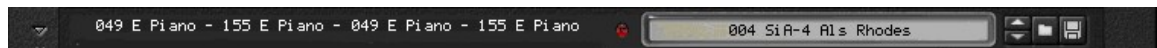
6 Instrument Patches

Loading and saving patches is done in the same way as with any other internal Reason device. You can browse patches with the up and down buttons in the Patch Browser group, or by clicking on the patch name in the display and selecting an item from the pop up menu.

6.1 Single instrument and multi instrument patches

The instruments patches are divided in 2 groups: Single instruments patches and multi instruments patches.

6.1.1 Single instrument patches



One Rumble K II Light device holds all the parameters to play and alter one Kawai K1 single instrument. All the patches are divided in four groups (A, B, C and D), each group item holds two instrument patches. The patch name starts with a number (001), a capital indicating single instrument patch (S), an 'i', then the group name (A) followed by a number ranging from 1 to 8 and finally the short name of the patch. For example: 004 SiA-4 Als Rhodes. All the single instrument patches can be found as .repatch files in the "004 Techniques\001 Single Patches to build Multi Patch Combinators" folder.

Please note: When browsing the simple instrument patches in these folders, sudden changes in sound might appear when a new patch is loaded. Therefore all the single instrument .repatch files are also put into Combinator files in the "001 Single Patches Combinators" folder. So, if you want to scroll through a folder with patches in the Patch browser without any artifacts during loading, it is best to play the single instrument patches from this folder or have Patch Correction enabled on the back panel.

6.1.2 Multi instrument patches



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A multi instrument is built in a Combinator with several Rumble K II Light single instrument patches attached to a Mixer. For example: Multi patch IA-2 Pizz String is built from two single instrument patches: Pizzicato (Single instrument patch IB-8) and two times String Ens (Single instrument patch IA-3). All the multi instrument patches can be found as Combinator or .cmb files in the "002 Multi Patches Combinators" folder. A Kawai K1 multi instrument can contain 8 single instrument patches.

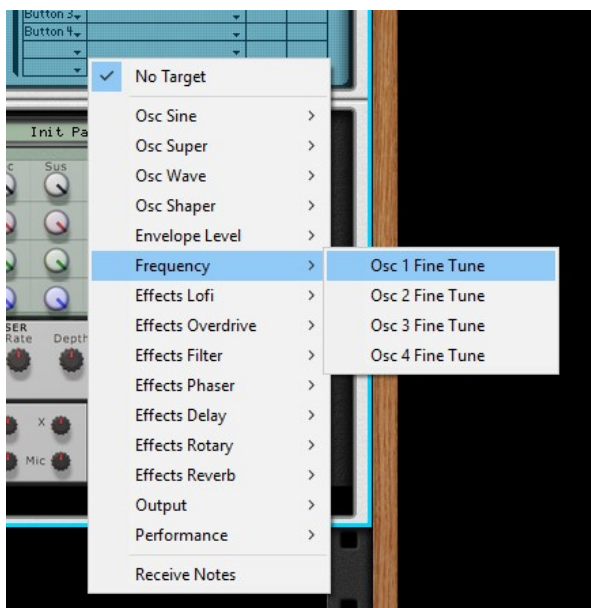
Once a multi instrument patch is created with aid from the Combinator, the Combinator Programmer allows you to assign 4 rotaries and 4 knobs to a lot of functions.

7 Combinator Menu

The Combinator Programmer target menu exists from the following main menu items:



Please note: One menu item, Frequency, is not represented as a function with rotaries or knobs on the front or back panels of Rumble K II Light. It is listed in the Target menu to fine tune the 4 Wave Loop oscillators.



8 Patch List

Root folder:

- 001 IA-1 Voice and Orchestra.cmb
- 001 SiA-1 Ahh.repatch
- 003 IA-3 Air Piano.cmb
- 010 IB-2 Hampton.cmb
- 013 SiB-5 Jazz Organ.repatch
- 016 SiB-8 Pizzicato.repatch
- 023 SiC-7 Dragon Hall.repatch
- 024 IC-8 Raw Power.cmb
- 027 ID-3 Fusion.cmb
- 027 SiD-3 Vybes.cmb

001 Single Patches folder:

- 001 SiA-1 Voice.cmb
- 002 SiA-2 6 String.cmb
- 002 SiA-2 12 String.cmb
- 003 SiA-3 String Ens.cmb
- 003 SiA-3 String Pad.cmb
- 004 SiA-4 Als Rhodes.cmb
- 004 SiA-4 Digi Piano.cmb
- 005 SiA-5 Return Home.cmb
- 005 SiA-5 Visitors.cmb
- 006 SiA-6 Flute.cmb
- 006 SiA-6 Pan Flute.cmb
- 007 SiA-7 French Horn.cmb
- 007 SiA-7 Trumpet.cmb
- 008 SiA-8 1 Key Beat [Run].cmb
- 008 SiA-8 Gong Of Kings.cmb
- 009 SiB-1 Kimono.cmb
- 009 SiB-1 Sitar.cmb
- 010 SiB-2 Piano 1.cmb
- 010 SiB-2 Piano 2.cmb
- 011 SiB-3 Jazz Harp.cmb
- 011 SiB-3 Saxy.cmb
- 012 SiB-4 Fuzz Clav.cmb
- 012 SiB-4 Harpsicord.cmb
- 013 SiB-5 Deep Purple.cmb
- 013 SiB-5 Jazz Organ.cmb
- 014 SiB-6 Clarinet.cmb
- 014 SiB-6 Oboe.cmb
- 015 SiB-7 Bowed String.cmb
- 015 SiB-7 Cellos.cmb
- 016 SiB-8 Orchestra.cmb
- 016 SiB-8 Pizzicato.cmb
- 017 SiC-1 Steel Keys.cmb
- 017 SiC-1 Stratocast.cmb
- 018 SiC-2 Club Piano.cmb
- 018 SiC-2 Strut and Stuf.cmb
- 019 SiC-3 Analog Brass.cmb
- 019 SiC-3 Nasty Brass.cmb
- 020 SiC-4 Crocketts.cmb
- 020 SiC-4 Jan his Theme.cmb
- 021 SiC-5 Ole.cmb

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- 021 SiC-5 Reflection.cmb
- 022 SiC-6 Aftertouch.cmb
- 022 SiC-6 Heavy Hitter.cmb
- 023 SiC-7 Dragon Hall.cmb
- 023 SiC-7 Terminator.cmb
- 024 SiC-8 Arrangement.cmb
- 024 SiC-8 Nomads.cmb
- 025 SiD-1 Ac Bass.cmb
- 025 SiD-1 Kick Bass.cmb
- 026 SiD-2 Electric Bass.cmb
- 026 SiD-2 Pull Bass.cmb
- 027 SiD-3 Marimba.cmb
- 027 SiD-3 Vybes.cmb
- 028 SiD-4 Bellery.cmb
- 028 SiD-4 Glocken.cmb
- 029 SiD-5 Music Box.cmb
- 029 SiD-5 Steel Drums.cmb
- 030 SiD-6 Kick and E Snare.cmb
- 030 SiD-6 Kick and Snare.cmb
- 031 SiD-7 A Tom and Hi Hat.cmb
- 031 SiD-7 E Tom and Hi Hat.cmb
- 032 SiD-8 Ahh Strings.cmb
- 032 SiD-8 Cymbals.cmb

002 Multi Patches folder:

- 000 Init Patch.cmb
- 001 IA-1 Voice and Orchestra.cmb
- 002 IA-2 Pizz String.cmb
- 003 IA-3 Air Piano.cmb
- 004 IA-4 Suspense.cmb
- 005 IA-5 Easy Song [Run].cmb
- 006 IA-6 Lounge Lizz.cmb
- 007 IA-7 Quik Strike.cmb
- 008 IA-8 E Drum.cmb
- 009 IB-1 Captain Power.cmb
- 010 IB-2 Hampton.cmb
- 011 IB-3 Year 2010.cmb
- 012 IB-4 Clav Comp.cmb
- 013 IB-5 Nasty Split.cmb
- 014 IB-6 Wagner Str.cmb
- 015 IB-7 Big Combo.cmb
- 016 IB-8 Monsta Gong.cmb
- 017 IC-1 Stereo Bell.cmb
- 018 IC-2 String Guitar.cmb
- 019 IC-3 Mystery at Night.cmb
- 020 IC-4 Star Tours.cmb
- 021 IC-5 Piano String.cmb
- 022 IC-6 Major Minor.cmb
- 023 IC-7 1 Note Stack.cmb
- 024 IC-8 Raw Power.cmb
- 025 ID-1 2 Moon Sky.cmb
- 026 ID-2 Ceremony.cmb
- 027 ID-3 Fusion.cmb
- 028 ID-4 Peaceful.cmb
- 029 ID-5 Electric Pop.cmb
- 030 ID-6 Lite Side.cmb
- 031 ID-7 Exotic Seq.cmb

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- 032 ID-8 Perc Ens.cmb

004 Techniques:

- Glide Modulation.cmb
- Ring Modulation on Key Release.cmb

001 Single Patches to build Multi Patch Combinators:

- 001 SiA-1 Ahh.repatch
- 001 SiA-1 Voice.repatch
- 002 SiA-2 12 String.repatch
- 002 SiA-2 6 String.repatch
- 003 SiA-3 String Ens.repatch
- 003 SiA-3 String Pad.repatch
- 004 SiA-4 Als Rhodes.repatch
- 004 SiA-4 Digi Piano.repatch
- 005 SiA-5 Return Home.repatch
- 005 SiA-5 Visitors.repatch
- 006 SiA-6 Flute.repatch
- 006 SiA-6 Pan Flute.repatch
- 007 SiA-7 French Horn.repatch
- 007 SiA-7 Trumpet.repatch
- 008 SiA-8 1 Key Beat.repatch
- 008 SiA-8 Gong Of Kings.repatch
- 009 SiB-1 Kimono.repatch
- 009 SiB-1 Sitar.repatch
- 010 SiB-2 Piano 1.repatch
- 010 SiB-2 Piano 2.repatch
- 011 SiB-3 Jazz Harp.repatch
- 011 SiB-3 Saxy.repatch
- 012 SiB-4 Fuzz Clav.repatch
- 012 SiB-4 Harpsicord.repatch
- 013 SiB-5 Deep Purple.repatch
- 013 SiB-5 Jazz Organ.repatch
- 014 SiB-6 Clarinet.repatch
- 014 SiB-6 Oboe.repatch
- 015 SiB-7 Bowed String.repatch
- 015 SiB-7 Cellos.repatch
- 016 SiB-8 Orchestra.repatch
- 016 SiB-8 Pizzicato.repatch
- 017 SiC-1 Steel Keys.repatch
- 017 SiC-1 Stratocast.repatch
- 018 SiC-2 Club Piano.repatch
- 018 SiC-2 Strut and Stuf.repatch
- 019 SiC-3 Analog Brass.repatch
- 019 SiC-3 Nasty Brass.repatch
- 020 SiC-4 Crocketts.repatch
- 020 SiC-4 Jan his Theme.repatch
- 021 SiC-5 Ole.repatch
- 021 SiC-5 Reflection.repatch
- 022 SiC-6 Aftertouch.repatch
- 022 SiC-6 Heavy Hitter.repatch
- 023 SiC-7 Dragon Hall.repatch
- 023 SiC-7 Terminator.repatch
- 024 SiC-8 Arrangement.repatch
- 024 SiC-8 Nomads.repatch
- 025 SiD-1 Ac Bass.repatch
- 025 SiD-1 Kick Bass.repatch

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- 026 SiD-2 Electric Bass.repatch
- 026 SiD-2 Pull Bass.repatch
- 027 SiD-3 Marimba.repatch
- 027 SiD-3 Vybes.repatch
- 028 SiD-4 Bellery.repatch
- 028 SiD-4 Glocken.repatch
- 029 SiD-5 Music Box.repatch
- 029 SiD-5 Steel Drums.repatch
- 030 SiD-6 Kick and E Snare.repatch
- 030 SiD-6 Kick and Snare.repatch
- 031 SiD-7 A Tom and Hi Hat.repatch
- 031 SiD-7 E Tom and Hi Hat.repatch
- 032 SiD-8 Ahh Strings.repatch
- 032 SiD-8 Cymbals.repatch

9 Credits

- Kawai JP for permission, Kawai US for .sysex files and manual.
- José Kouwenhoven, coaching.
- Noel Gonzalez, promotion.
- Kenni, Reasontalk forum beta test hosting.
- Propellerhead Software AB for their support.
- Bart, manual and graphics.
- Wongo the Sane, signature patches.
- Navi Retlav, signature patches.
- Buddaka, signature patches.
- Loque, signature patches.
- All the beta testers.

10 Appendixes

Connecting external devices

A note about connecting external devices, like the RPG 8 Arp, Matrix or other sequencers:

A connected RPG-8 works fine, until 60 Hz or 1/128 notes rate. Above the 75 Hz notes rate Rumble K II Light goes silent. In this case set the Gate Length on the RPG – 8 above a value of 47 and the sound 'comes back again'.

Browsing patches

Changing .repatch files in the Patch Browser while notes are sustained may cause a sudden jump in volume and will play the oscillators from the current patch with the settings of the new patch. The change disappears when a new note is triggered or when Patch Correction on the back panel is turned On.

For every .repatch file in the '004 Techniques\001 Single Patches to build Multi Patch Combinators' folder, there is also a Combinator or .cmb file in the '001 Single Patches Combinators' folder. Combinator patches do not suffer from the behavior mentioned above.

Envelope decay

A few Wave Loops may produce a short click when the Envelope Attack and / or Envelope Decay are set to 0. When the Envelope Decay is set to 0,4 %, the click will be gone.

Overdrive effect

When the Overdrive in the effects panel is turned to On, the output signal will change from stereo to mono. This results in a different behaviour for the Oct(ave), Pan(ning) and Key (Pan On Off) on the Output panel: The Octave should be manually shifted one octave lower to play notes above B4, panning will not produce any output on the right channel and the Key Pan will not work, although it is turned on.

Modulation Matrix

Wave Loop oscillators 1 to 4 with a Wave Loop number higher then 205, have their Wave Loop Mode set to Off internally. If one or both the envelope time slots (Time Vel and Time KS) are used on these Wave Loops, they may affect the timing of the Amp Envelope's Attack and Decay.

Aliasing

The Kawai K1 is notorious for its aliasing, which is regarded as a technical minus, but the aliasing makes the Kawai K1 have its own character. Also note that the Kawai K1 has low quality 8 bit short cycled samples and as they were recorded on tape before the analog-to-digital conversion, a lot of noise was added. You can correct the noise and hiss by setting the Noise Reduction on the back panel to On.

CPU load

To reduce CPU load, on the Output panel:

- Set Poly to Off.
- Set the Limiter to On.
- Decrease the Octave.

11 MIDI Implementation Chart

In the table below, first the MIDI CC Number is mentioned followed by the name of the function in Rumble K II Light:

[12] = Sine_Osc_1_On_Off
[13] = Sine_Osc_2_On_Off
[14] = Sine_Osc_3_On_Off
[15] = Sine_Osc_4_On_Off
[16] = Sine_Osc_Mix
[17] = Sine_Osc_Tune
[18] = Sine_Osc_Key_Track_On_Off
[19] = Sine_Osc_Ring_Mod_On_Off
[20] = Super_Osc_1_On_Off
[21] = Super_Osc_2_On_Off
[22] = Super_Osc_3_On_Off
[23] = Super_Osc_4_On_Off
[24] = Super_Osc_Mix
[25] = Super_Osc_Tune
[26] = Super_Osc_Amount
[27] = Super_Osc_Detune
[28] = Super_Osc_Sub
[29] = Wave_Loop_1_On_Off
[30] = Wave_Loop_2_On_Off
[31] = Wave_Loop_3_On_Off
[33] = Wave_Loop_4_On_Off
[34] = Wave_Loop_1_Volume
[35] = Wave_Loop_2_Volume
[36] = Wave_Loop_3_Volume
[37] = Wave_Loop_4_Volume
[39] = Wave_Loop_1_Tune
[40] = Wave_Loop_2_Tune
[41] = Wave_Loop_3_Tune
[42] = Wave_Loop_4_Tune
[43] = Wave_Loop_1_Pan
[44] = Wave_Loop_2_Pan
[45] = Wave_Loop_3_Pan
[46] = Wave_Loop_4_Pan
[47] = Osc_1_Shaper_On_Off
[48] = Osc_2_Shaper_On_Off
[49] = Osc_3_Shaper_On_Off
[50] = Osc_4_Shaper_On_Off
[51] = Osc_1_Shaper_Drive
[52] = Osc_2_Shaper_Drive
[53] = Osc_3_Shaper_Drive
[54] = Osc_4_Shaper_Drive
[55] = Osc_1_Envelope_Attack
[56] = Osc_2_Envelope_Attack
[57] = Osc_3_Envelope_Attack
[58] = Osc_4_Envelope_Attack
[59] = Osc_1_Envelope_Decay
[60] = Osc_2_Envelope_Decay
[61] = Osc_3_Envelope_Decay
[62] = Osc_4_Envelope_Decay
[63] = Osc_1_Envelope_Sustain
[65] = Osc_2_Envelope_Sustain
[66] = Osc_3_Envelope_Sustain
[67] = Osc_4_Envelope_Sustain

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[68] = Osc_1_Envelope_Release
[69] = Osc_2_Envelope_Release
[70] = Osc_3_Envelope_Release
[71] = Osc_4_Envelope_Release
[72] = Osc_1_Release_Timer
[73] = Osc_2_Release_Timer
[74] = Osc_3_Release_Timer
[75] = Osc_4_Release_Timer
[76] = Osc_1_Fine_Tune
[77] = Osc_2_Fine_Tune
[78] = Osc_3_Fine_Tune
[79] = Osc_4_Fine_Tune
[80] = Lofi_On_Off
[81] = Lofi_Sample_Rate
[82] = Lofi_Jitter
[83] = Lofi_Mix
[84] = Overdrive_On_Off
[85] = Overdrive_Drive
[86] = Overdrive_Tone
[87] = Overdrive_Presence
[88] = Overdrive_Mode
[89] = High_Low_Pass_Filter_On_Off
[90] = High_Low_Pass_Filter_Mode
[91] = High_Low_Pass_Filter_Cutoff
[92] = High_Low_Pass_Filter_Resonance
[93] = Phaser_On_Off
[94] = Phaser_Rate
[95] = Phaser_Depth
[102] = Phaser_Feedback
[103] = Phaser_Center
[104] = Phaser_Spread
[105] = Phaser_Mix
[106] = Delay_On_Off
[107] = Delay_Time
[108] = Delay_Feedback
[109] = Delay_Feedback_Mode
[110] = Delay_Ratio
[111] = Delay_Sync_On_Off
[112] = Delay_Damping
[113] = Delay_Mix
[114] = Rotary_On_Off
[115] = Rotary_Speed
[116] = Rotary_Horn_Acceleration
[117] = Rotary_Horn_Slow
[118] = Rotary_Horn_Fast
[119] = Rotary_Horn_Amp_Mod
[128] = Rotary_Bass_Acceleration
[129] = Rotary_Bass_Slow
[130] = Rotary_Bass_Fast
[131] = Rotary_Bass_Amp_Mod
[132] = Rotary_Horn_Freq_Mod
[133] = Rotary_Crossover
[134] = Rotary_Balance
[135] = Rotary_Mic_Angle
[136] = Reverb_On_Off
[137] = Reverb_Time
[138] = Reverb_Pre_Delay
[139] = Reverb_High_Cut
[140] = Reverb_Low_Cut
[141] = Reverb_Damping

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[142] = Reverb_Mix
[143] = Octave
[144] = Pan
[145] = Volume
[146] = Poly_Mode_On_Off
[147] = Key_Pan_On_Off
[148] = Limiter_On_Off
[149] = HF_Correction_On_Off
[150] = Sustain_Pedal_Mode
[151] = Glide_Mode
[152] = Glide_Time

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12 Remote items list

Scope	Oenkenstein Audio	nl.oenkenstein.RK2L			
Remotable		Min	Max	Input type	Output type
Sine Osc 1 On Off		0	1	Toggle	ValueOutput
Sine Osc 2 On Off		0	1	Toggle	ValueOutput
Sine Osc 3 On Off		0	1	Toggle	ValueOutput
Sine Osc 4 On Off		0	1	Toggle	ValueOutput
Sine Osc Mix		0	4194304	Value	ValueOutput
Sine Osc Tune		0	4194304	Value	ValueOutput
Sine Osc Key Track On Off		0	1	Toggle	ValueOutput
Sine Osc Ring Mod On Off		0	1	Toggle	ValueOutput
Super Osc 1 On Off		0	1	Toggle	ValueOutput
Super Osc 2 On Off		0	1	Toggle	ValueOutput
Super Osc 3 On Off		0	1	Toggle	ValueOutput
Super Osc 4 On Off		0	1	Toggle	ValueOutput
Super Osc Mix		0	4194304	Value	ValueOutput
Super Osc Tune		0	4194304	Value	ValueOutput
Super Osc Amount		0	6	Value	ValueOutput
Super Osc Detune		0	4194304	Value	ValueOutput
Super Osc Sub		0	4194304	Value	ValueOutput
Wave Loop 1 On Off		0	1	Toggle	ValueOutput
Wave Loop 2 On Off		0	1	Toggle	ValueOutput
Wave Loop 3 On Off		0	1	Toggle	ValueOutput
Wave Loop 4 On Off		0	1	Toggle	ValueOutput
Wave Loop 1 Volume		0	4194304	Value	ValueOutput
Wave Loop 2 Volume		0	4194304	Value	ValueOutput
Wave Loop 3 Volume		0	4194304	Value	ValueOutput
Wave Loop 4 Volume		0	4194304	Value	ValueOutput
Wave Loop 1 Tune		0	4194304	Value	ValueOutput
Wave Loop 2 Tune		0	4194304	Value	ValueOutput
Wave Loop 3 Tune		0	4194304	Value	ValueOutput
Wave Loop 4 Tune		0	4194304	Value	ValueOutput
Wave Loop 1 Pan		0	4194304	Value	ValueOutput
Wave Loop 2 Pan		0	4194304	Value	ValueOutput
Wave Loop 3 Pan		0	4194304	Value	ValueOutput
Wave Loop 4 Pan		0	4194304	Value	ValueOutput
Osc 1 Shaper On Off		0	1	Toggle	ValueOutput
Osc 2 Shaper On Off		0	1	Toggle	ValueOutput
Osc 3 Shaper On Off		0	1	Toggle	ValueOutput
Osc 4 Shaper On Off		0	1	Toggle	ValueOutput
Osc 1 Shaper Drive		0	4194304	Value	ValueOutput
Osc 2 Shaper Drive		0	4194304	Value	ValueOutput
Osc 3 Shaper Drive		0	4194304	Value	ValueOutput
Osc 4 Shaper Drive		0	4194304	Value	ValueOutput
Osc 1 Envelope Attack		0	4194304	Value	ValueOutput
Osc 2 Envelope Attack		0	4194304	Value	ValueOutput
Osc 3 Envelope Attack		0	4194304	Value	ValueOutput
Osc 4 Envelope Attack		0	4194304	Value	ValueOutput
Osc 1 Envelope Decay		0	4194304	Value	ValueOutput
Osc 2 Envelope Decay		0	4194304	Value	ValueOutput
Osc 3 Envelope Decay		0	4194304	Value	ValueOutput
Osc 4 Envelope Decay		0	4194304	Value	ValueOutput

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Osc 1 Envelope Sustain	0	4194304	Value	ValueOutput
Osc 2 Envelope Sustain	0	4194304	Value	ValueOutput
Osc 3 Envelope Sustain	0	4194304	Value	ValueOutput
Osc 4 Envelope Sustain	0	4194304	Value	ValueOutput
Osc 1 Envelope Release	0	4194304	Value	ValueOutput
Osc 2 Envelope Release	0	4194304	Value	ValueOutput
Osc 3 Envelope Release	0	4194304	Value	ValueOutput
Osc 4 Envelope Release	0	4194304	Value	ValueOutput
Osc 1 Release Timer	0	4194304	Value	ValueOutput
Osc 2 Release Timer	0	4194304	Value	ValueOutput
Osc 3 Release Timer	0	4194304	Value	ValueOutput
Osc 4 Release Timer	0	4194304	Value	ValueOutput
Osc 1 Fine Tune	0	4194304	Value	ValueOutput
Osc 2 Fine Tune	0	4194304	Value	ValueOutput
Osc 3 Fine Tune	0	4194304	Value	ValueOutput
Osc 4 Fine Tune	0	4194304	Value	ValueOutput
Lofi On Off	0	1	Toggle	ValueOutput
Lofi Sample Rate	0	4194304	Value	ValueOutput
Lofi Jitter	0	4194304	Value	ValueOutput
Lofi Mix	0	4194304	Value	ValueOutput
Overdrive On Off	0	1	Toggle	ValueOutput
Overdrive Drive	0	4194304	Value	ValueOutput
Overdrive Tone	0	4194304	Value	ValueOutput
Overdrive Presence	0	4194304	Value	ValueOutput
Overdrive Mode	0	2	Value	ValueOutput
High Low Pass Filter On Off	0	1	Toggle	ValueOutput
High Low Pass Filter Mode	0	5	Value	ValueOutput
High Low Pass Filter Cutoff	0	4194304	Value	ValueOutput
High Low Pass Filter Resonance	0	4194304	Value	ValueOutput
Phaser On Off	0	1	Toggle	ValueOutput
Phaser Rate	0	4194304	Value	ValueOutput
Phaser Depth	0	4194304	Value	ValueOutput
Phaser Feedback	0	4194304	Value	ValueOutput
Phaser Center	0	4194304	Value	ValueOutput
Phaser Spread	0	4194304	Value	ValueOutput
Phaser Mix	0	4194304	Value	ValueOutput
Delay On Off	0	1	Toggle	ValueOutput
Delay Time	0	4194304	Value	ValueOutput
Delay Feedback	0	4194304	Value	ValueOutput
Delay Feedback Mode	0	3	Value	ValueOutput
Delay Ratio	0	4194304	Value	ValueOutput
Delay Sync On Off	0	1	Toggle	ValueOutput
Delay Damping	0	4194304	Value	ValueOutput
Delay Mix	0	4194304	Value	ValueOutput
Rotary On Off	0	1	Toggle	ValueOutput
Rotary Speed	0	2	Value	ValueOutput
Rotary Horn Acceleration	0	4194304	Value	ValueOutput
Rotary Horn Slow	0	4194304	Value	ValueOutput
Rotary Horn Fast	0	4194304	Value	ValueOutput
Rotary Horn Amp Mod	0	4194304	Value	ValueOutput
Rotary Bass Acceleration	0	4194304	Value	ValueOutput
Rotary Bass Slow	0	4194304	Value	ValueOutput
Rotary Bass Fast	0	4194304	Value	ValueOutput
Rotary Bass Amp Mod	0	4194304	Value	ValueOutput

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Rotary Horn Freq Mod	0	4194304	Value	ValueOutput
Rotary Crossover	0	4194304	Value	ValueOutput
Rotary Balance	0	4194304	Value	ValueOutput
Rotary Mic Angle	0	4194304	Value	ValueOutput
Reverb On Off	0	1	Toggle	ValueOutput
Reverb Time	0	4194304	Value	ValueOutput
Reverb Pre Delay	0	4194304	Value	ValueOutput
Reverb High Cut	0	4194304	Value	ValueOutput
Reverb Low Cut	0	4194304	Value	ValueOutput
Reverb Damping	0	4194304	Value	ValueOutput
Reverb Mix	0	4194304	Value	ValueOutput
Octave	0	6	Value	ValueOutput
Pan	0	4194304	Value	ValueOutput
Volume	0	4194304	Value	ValueOutput
Poly Mode On Off	0	1	Toggle	ValueOutput
Key Pan On Off	0	1	Toggle	ValueOutput
Limiter On Off	0	1	Toggle	ValueOutput
HF Correction On Off	0	1	Toggle	ValueOutput
Sustain Pedal Mode	0	3	Value	ValueOutput
Glide Mode	0	2	Value	ValueOutput
Glide Time	0	4194304	Value	ValueOutput
Mod Wheel	0	127	Value	ValueOutput
Breath Control	0	127	Value	ValueOutput
Expression	0	127	Value	ValueOutput
Sustain Pedal	0	127	Value	ValueOutput
Aftertouch	0	127	Value	ValueOutput
Pitch Bend	-8192	8191	Value	ValueOutput
Device Name	0	0	-	TextOutput
Patch Name	0	0	-	TextOutput
Select Patch Delta	0	0	Delta	TextOutput
Select Previous Patch	0	0	Trig	TextOutput
Select Next Patch	0	0	Trig	TextOutput