Oenkenstein Audio

RUMBLER COMPACT SYNTHESIZER

Operation Manual

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Content

1 Introduction

Rumbler Compact Synthesizer is a digital wavetable synthesizer.

1.1 Description

This device of the Rumble series comes with Saw, Square and Wavetable oscillators, an Amp Envelope section with DAHDSR controls, a LFO, an Audio Modulation section with 19 modulation matrixes and 8 effects devices with 23 modulation matrixes. All the modulation matrixes have 12 sources. Rumbler Compact Synthesizer has also audio in, 25 CV inputs, 23 CV through and 2 CV outputs.

Rumbler Compact Synthesizer uses additive wavetable synthesis to generate sounds. The additive synthesis is based on a Wave oscillator using waveforms, one of the in total 3 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. The other 2 oscillators are Saw and Square wave based oscillators and are mixed with the Wave oscillator. Rumbler Compact Synthesizer features Ring Modulation with an internal Sine oscillator modulating the Wave oscillator.

The Wave oscillator contains 228 waveforms. High quality waveforms and lofi 8 bit waveforms..

Rumbler Compact Synthesizer comes with 211 instrument patches.

The Rumble 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 Specifications

1. Minimal requirements for the Rack Extension: Duo Core based computer with at least 2 GHz processor, 4 GB of RAM and Reasonstudios Reason 10.2 or higher running on Windows or Mac OSX.
2. Type of device: Digital synthesizer.
3. Method of synthesis: Additive 16 bit wavetable synthesis with amplitude modulation combined with 2 high quality saw and square oscillators.
4. Amount of oscillators: 3 (Wave oscillator, Saw and Square oscillators)
5. Low Frequency Oscillator (LFO)
6. Effects:
    - Ring modulation, Drive, EQ, Low Pass 12 Filter, Glide and Bend on the oscillator's output.
    - Chorus, Delay, Tremolo, Distortion, Convolution Reverb, Linear Reverb, Lofi and Phaser
    - Audio Input to send to the 8 effects
7. Amount of synthesizer modulation matrixes: 17
    - 4 slots in the 3 Oscillators panel
    - 5 slots in the Amplitude Envelope panel
    - 1 slot in the LFO panel
    - 6 slots in the Audio Modulation panel
    - 2 slots in the Output panel
8. Amount of effects modulation matrixes: 23
    - 3 slots in the Distortion panel
    - 4 slots in the Convolution Reverb panel
    - 6 slots in the Linear Reverb panel
    - 4 slots in the Lofi panel
    - 6 slots in the Phaser panel
9. Control Voltage In (CV In): 25 and Through (CV Thr): 23
    1. Saw Oscillator Level
    2. Square Oscillator Level
    3. Saw and Square Oscillator Tune
    4. Saw and Square Oscillator Detune
    5. Wave Oscillator Level
    6. Wave Oscillator Tune
    7. Wave Oscillator Fine Tune

8. Ring Modulation Level
9. Ring Modulation Disharmonic Tuning
10. Drive (Level)
11. EQ Gain
12. EQ Band Q or EQ Band Width
13. EQ Frequency
14. Bend Depth
15. Bend Time
16. Pan
17. Master Level
18. Low Pass 12 Filter Cutoff
19. Low Pass 12 Filter Resonance
20. Convolution Reverb Mix
21. Chorus Depth
22. Delay Feedback
23. Tremolo Depth
24. Gate
25. Note

10. Control Voltage Out (CV Out): 2
    - Velocity (Vel)
    - Key

Rumbler Compact Synthesizer front panel:

Rumbler Compact Synthesizer back panel:

2 Front of the device

2.1 Panels overview

- **Patch Browser**
- **Logo**
- **Device name.**
- **MIDI Note indicator**
- **Oscillators** Panel (1) with:
    - Oscillator types:
        - Saw oscillator
        - Square oscillator
        - Wave oscillator
        - Oscillator modulation slots
- **Amp Envelope** panel (2) with:
    - Delay, Attack, Hold, Decay, Sustain and Release (DAHDSR)
    - Amp Envelope modulation slots
- **LFO** panel (3) with:
    - Drive Shape
    - Rate or Speed
    - Trigger On Off
    - LFO modulation slot
- **Audio Modulation** panel (4) with:
    - Ring Modulation
    - Drive to change the waveform shaped by the 3 oscillators. Capable of producing distortion and adding harmonics
    - Gain or EQ
    - Filter Cut-off and Resonance
    - Audio modulation slots
- **Output** panel (5) with:
    - Panning
    - Mater Level
    - High Frequency Correction

  - Poly Mode On Off
  - Output modulation slots

Effects Panels.

- **Chorus** panel (6) with:
  - Rate
  - Depth
  - Delay Time
  - Voices amount
  - Mix dry / wet
- **Delay** panel (7) with:
  - Delay Time
  - Feedback
  - Ratio
  - Damp
  - Mix dry / wet
- **Tremolo** panel (8) with:
  - Rate
  - Depth (dry / wet)
  - Attack
  - Release
  - Phase
  - Spread
- **Distortion** panel (9) with:
  - Mode
  - Drive
  - Rectif
  - Mix dry / wet.
- **Convolution Reverb** panel (10) with:
  - Mode
  - Pre Delay
  - Quality
  - Width
  - Decay
  - Mix dry / wet
- **Reverb** panel (11) with:
  - Time
  - Pre Delay
  - Low Cut
  - High Cut
  - Damping
  - Mix dry / wee

3 Panels

Rumbler Compact Synthesizer is divided in panels, each with one or more sections which are separated by thin lines on the panel. A section uses and displays a set of various automatable controllers like rotating knobs, display's, pop up menus, On / Off buttons and faders. Most panels have one modulation slot.

3.1 Panel 1: Oscillators panel

The Oscillators panel has 3 sections. A Saw oscillator section (1), the Square oscillator section (2) and the Waveform section (3). The output of the Oscillators panel goes to the Amp Envelope panel.

3.1.1 Section 1 and 2: Saw and Square oscillators

The Saw and Square oscillators section adds up to 7 detuned saw waves and square wave oscillators to the Wave oscillator's playback, typically used for creating unison. Unison is created by two or more oscillators that are slightly detuned in correspondence to each other, which makes the

sound fatter. Changing the Saw oscillators Amount (Amt), Detune (Det) and Tune, will affect the Square oscillator's Amt, Detune and Tune as well.

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- **1: Saw - Saw Oscillator Level** (Saw Oscillator Level): Determines the Saw oscillator's volume (Scale: 0 % / 100 %. Default: 0 %).
- **2: Amt – Saw And Square Oscillator Amount** (Saw And Square Oscillator Amount): Determines the number of the saw and square oscillators (Scale: 1 / 7. Default: 4).
- **3: Detune - Saw And Square Oscillator Detune** (Saw And Square Oscillator Detune): Determines the amount of detuning in Cents between the saw and square oscillators (Scale: 0 / 100. Default: 0).
- **4: Level Mod - Saw And Square Osc Lvl Mod Amount** (Saw And Square Osc Lvl Mod Amount): Determines the amount of modulation applied to the Saw and Square oscillators level (Scale: -100 / 100. Default: 0).
- **5: Mod source display - Saw And Square Osc Lvl Mod Source** (Saw And Square Osc Lvl Mod Source): Determines the modulation source applied to the Saw and Square oscillators Level (Scale: Cons, Rnd, Rnd+, PB, Aft, MW, Key, Vel, Amp, LFO, Md1, Md2. Default: Cons).
- **6: Sqr - Square Oscillator Level** (Square Oscillator Level): Determines the Square oscillator's volume (Scale: 0 % / 100 %. Default: 0 %).
- **7: Tune - Saw And Square Oscillator Tune** (Saw And Square Oscillator Tune): Determines the Saw / Square oscillator's tuning or pitch in semitones (Scale: -36 / +36. Default: 0 or C4).
- **8: Tune Mod - Saw And Square Osc Tune Mod Amount** (Saw And Square Osc Tune Mod Amount): Determines the amount of modulation applied to the Saw and Square oscillators tuning (Scale: -100 / 100. Default: 0).
- **9: Mod source display - Saw And Square Osc Tune Mod Source** (Saw And Square Osc Tune Mod Source): Determines the modulation source applied to the Saw and Square oscillators tuning (Scale: Cons, Rnd, Rnd+, PB, Aft, MW, Key, Vel, Amp, LFO, Md1, Md2. Default: Cons).

Each section has 1 modulation slot display with a source pop up menu (**5** and **9**). Rumbler Compact Synthesizer comes with 211 instrument patches.:

1. Cons = Constant maximum value
2. Rnd = Random bipolar value between -1 and +1
3. Rnd+ = Random unipolar value between 0 and 1
4. PB = Pitch Bend, incoming MIDI pitch bend
5. Aft = Aftertouch, incoming MIDI channel pressure
6. MW= Modulation Wheel
7. Key = Keyboard position relative to C3. Value increases by 1.0 per octave
8. Vel = Velocity, incoming MIDI velocity
9. Amp = Amp Envelope curve shaped by the Delay, Attack, Hold, Decay, Sustain and Release settings
10. LFO = LFO or Low Frequency Oscillator
11. Md1 = Mod 1 Envelope curve shaped by the Attack, Hold, Decay, Sustain and Release settings in the Mod 1 Envelope section on the back panel
12. Md2 = Mod 2 Envelope curve shaped by the Attack, Hold, Decay, Sustain and Release settings in the Mod 2 Envelope section on the back panel

3.1.2 Section 3: Wave oscillator

Rumbler Compact Synthesizer provides a Wave oscillator with a waveform bank containing 228 different waveforms as a starting point for the creation of sounds. There are two types of waveforms used:

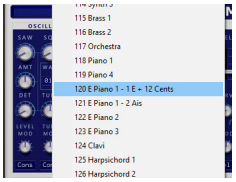
1. 7 High quality basic waveforms for generating Sine, Square, Saw, White noise, Pink noise, Brown noise and Static noise. These are labelled with the numbers 001 – 008.
2. Basic waveforms from a Kawai K1 digital synthesizer from 1985. The bank holds 221 basic 8 bit lo-fi waveforms with 52 single-shots and 176 looped waves. The basic waveforms are labelled with the numbers 009 – 228.

Rumbler Compact Synthesizer uses high quality and lo-fi waveforms combined for a unique character. 2022 meets 1985.

- **1: Wave - Wave Osc Level** (Wave Osc Level): Determines the level or volume of the Saw, the Square and Wave oscillators (Scale: -∞ / +12 dB. Default: -6,1 dB).

- **2: Wave Select - Wave Osc Select** (Wave Osc Select): Determines the waveform (Scale: 001 / 228. Default: 001 Sine).The waveforms can be selected by clicking on the Wave Osc Select display (**A**), which is a pop up menu or with the big Wave Osc Select knob (**B**).

Although you can scroll through the pop up menu list with a mouse, to quickly navigate through the long list of waveforms, you also can use the keyboard.



For example: If you want to choose waveform number 120: Press ‘1’ on the keyboard and the waveform display pop up menu will select waveform number 100 and then use the up and down arrow(s) on the keyboard to scroll down to waveform number 120.

Another example: If you want to select waveform number 256. Press ‘0’ on the keyboard and the pop up menu will select waveform number 001. Now press the arrow up on the keyboard once to select waveform 256.

*** Waveforms without mentioning a note like Dis (or D#) behind their name are all tuned C3. Some waveform names like ‘120 E Piano 1 -1 + 12 Cents’ have a number (+12) behind their name followed by the word ‘Cents’. The number indicates the Fine Tune correction needed measured in Cents (-2) to make the Waveform sound in tune with the Waveforms names note (E).**

*** Waveforms marked with an * behind the name are one shot waveforms. All the others are looped waveforms.**

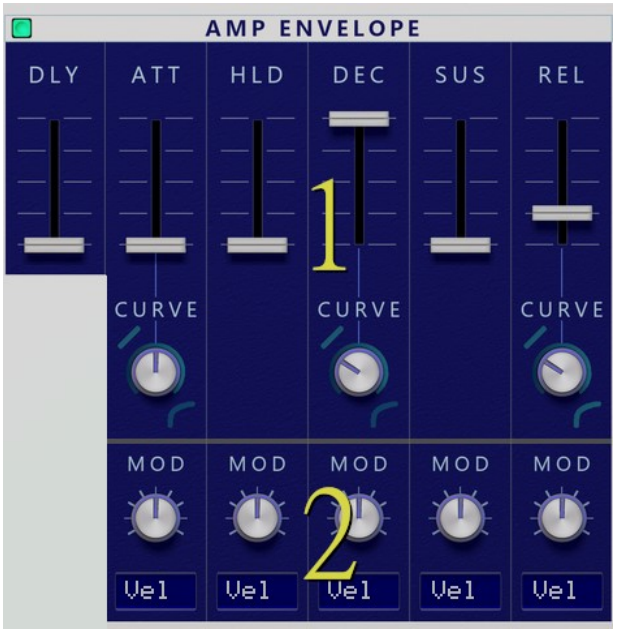
- **3: Tune - Wave Osc Tune** (Wave Osc Tune): Determines the tuning or pitch of the Wave oscillator in semitones (Scale: -36 / +36. Default: 0).

- **4: Level Mod - Wave Osc Level Mod Amount** (Wave Osc Level Mod Amount): Determines the amount of modulation applied to the Wave oscillator's level (Scale: -100 / 100. Default: 0).
- **5: Mod source display - Wave Osc Level Mod Source** Wave Osc Level Mod Source): Determines the modulation source applied to the Wave oscillator's Level (Scale: Cons, Rnd, Rnd+, PB, Aft, MW, Key, Vel, Amp, LFO, Md1, Md2. Default: Vel).
- **6: Fine - Wave Osc Fine Tune** (Wave Osc Fine Tune). Provides precise pitch adjustment (Scale: -50 / +50 cents. Default: 0).
- **7: Tune Mod - Wave Osc Tune Mod Amount** (Wave Osc Tune Mod Amount): Determines the amount of modulation applied to the Wave oscillator's (Scale: -100 / 100. Default: 0).
- **8: Mod source display - Wave Osc Tune Mod Source** (Wave Osc Tune Mod Source): Determines the modulation source applied to the Wave oscillator's tuning (Scale: Cons, Rnd, Rnd+, PB, Aft, MW, Key, Vel, Amp, LFO, Md1, Md2. Default: PB).
  The source of the Wave Osc Tune Mod Source is set by default to the Pitch Bend Wheel on your MIDI controller. Moving the Pitch Bend (PB) alters the tuning of all the oscillators (Saw, Square and Wave). If you want to change the scale of the Pitch Bend, set the Wave Osc Tune Mod Amount according to the following table:
  - 029 %= 1 Semitone
  - 041 % = 2 Semitones
  - 050 % = 3 Semitones
  - 058 % = 4 Semitones
  - 065 % = 5 Semitones
  - 071 % = 6 Semitones
  - 076 % = 7 Semitones
  - 082 % = 8 Semitones
  - 087 % = 9 Semitones
  - 091 %= 10 Semitones
  - 096 % = 11 Semitones
  - 100 % = 12 Semitones

The modulation source display values:

1. Cons = Constant maximum value
2. Rnd = Random bipolar value between -1 and +1
3. Rnd+ = Random unipolar value between 0 and 1
4. PB = Pitch Bend, incoming MIDI pitch bend
5. Aft = Aftertouch, incoming MIDI channel pressure
6. MW= Modulation Wheel
7. Key = Keyboard position relative to C3. Value increases by 1.0 per octave
8. Vel = Velocity, incoming MIDI velocity
9. Amp = Amp Envelope curve shaped by the Delay, Attack, Hold, Decay, Sustain and Release settings
10. LFO = LFO or Low Frequency Oscillator
11. Md1 = Mod 1 Envelope curve shaped by the Attack, Hold, Decay, Sustain and Release settings in the Mod 1 Envelope section on the back panel
12. Md2 = Mod 2 Envelope curve shaped by the Attack, Hold, Decay, Sustain and Release settings in the Mod 2 Envelope section on the back panel

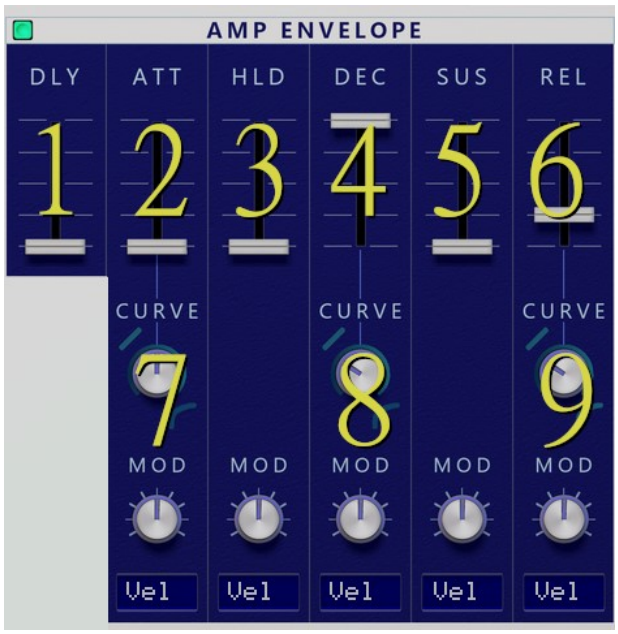
3.2 Panel 2: Amp Envelope panel



The Amp Envelope panel has 2 sections: The first section to set the envelope's Delay, Attack, Hold, Decay, Sustain and Release (1). The second section is the Amp Envelope Modulation matrix (2).

- **Button Display - Amp Envelope To Level On Off** (Amp Envelope To Level On Off): Toggles the Amp Envelope Panel On or Off (Scale: On / Off. Default: On).

3.2.1 Section 1: Faders and curves

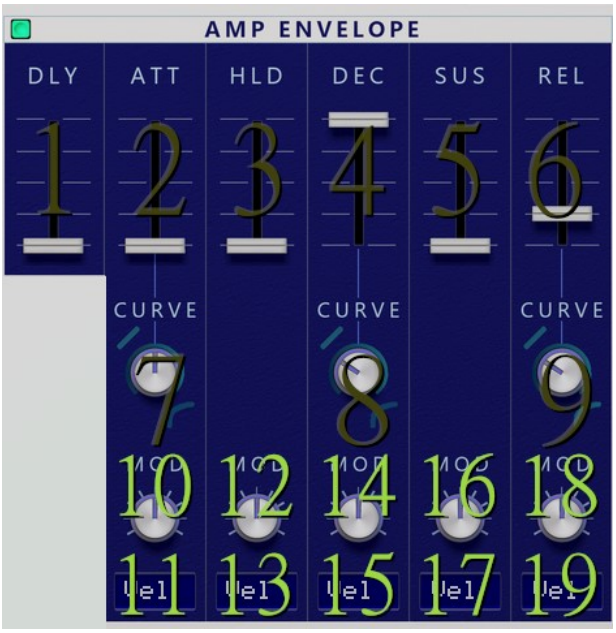


- **1: Dly - Envelope Delay Time** (Envelope Delay Time): Determines the amount of delay in seconds between when a note is played and when the effect of the Amp Envelope starts. The sound will start unmodulated and the Amp Envelope will kick in after you have kept the key(s) pressed down for a while (Scale: 0 seconds / 12 seconds. Default: 0 seconds).
- **2: Att - Envelope Attack** (Envelope Attack): Determines the time that a sound takes to peak. When you press a key on your keyboard, the envelope is triggered. The attack parameter then controls how long it should take before the controlled parameter (pitch or filter) reaches the maximum value, when you press a key. By setting attack to a value of 0, the destination parameter would reach the maximum value instantly. By raising the Envelope Attack parameter, the value will instead slowly slide to its maximum (Scale: 0 seconds / 16 seconds.

Default: 0 seconds). Values in seconds (s) shown in the tool tip are based on the Envelope Attack Curve set to 0 %.

- **3: Hold - Envelope Hold** (Envelope Hold): Determines how long the controlled parameter should stay at its maximum value before starting to decrease again. This can be used in combination with the Envelope Attack and Envelope Decay parameters to make a value reach its maximum level, stay there for a while (Envelope Hold) and then start dropping gradually down to the Envelope Sustain level (Scale: 0 seconds / 16 seconds. Default: 0 seconds).
- **4: Dec - Envelope Decay** (Envelope Decay): Determines the time that the sound takes to fall from the peak to the Envelope Sustain level. After the maximum value for a destination has been reached and the Envelope Hold time has expired, the controlled parameter will start to gradually drop down to the Envelope Sustain level. How long it should take before it reaches the Envelope Sustain level is controlled with the Envelope Decay parameter. If the Envelope Decay is set to 0, the value will immediately drop down to the Envelope Sustain level (Scale: 0 seconds / 16 seconds. Default: 16 seconds). Values in seconds (s) shown in the tooltip are based on the Envelope Decay Curve set to -50 %.
- **5: Sus - Envelope Sustain** (Envelope Sustain): Determines the volume (relative to the peak) when the key is held down. The Envelope Sustain parameter determines the value the Amp Envelope should drop back to after the Envelope Decay. If you set Envelope Sustain to full level however, the Envelope Decay setting doesn't matter since the value will never decrease. A combination of Envelope Decay and Envelope Sustain can be used for creating envelopes that rise up to the maximum value, then gradually decrease to, and stay on a level somewhere in-between zero and maximum (Scale: -∞ / 0 dB. Default: -∞ dB).
- **6: Rel - Envelope Release** (Envelope Release): Determines the time the sound takes to die out after the key is released. This works just like the Envelope Decay parameter, with the exception that it determines the time it takes for the value to fall back to zero after the key is released (Scale: 0 seconds / 16 seconds. Default: 63,2 ms or 25).
- **7: Curve - Envelope Attack Curve** (Envelope Attack Curve): Determines the curve for the Envelope Attack from a slow reach to the final value, following a linear curve, to a fast reach of the final value, following a logarithmic curve. (Scale: -100 % / +100 %. Default: 0 %). Typically 75 - 90% for logarithmic curves.
- **8: Curve - Envelope Decay Curve** (Envelope Decay Curve): Determines the curve for the Envelope Decay from a slow reach to the final, following a linear curve, to a fast reach of the final value, following a logarithmic curve. (Scale: -100 % / +100 %. Default: -50 %). Typically 75 - 90% for logarithmic curves.
- **9: Curve - Envelope Release Curve** (Envelope Release Curve): Determines the curve for the Envelope Release from a slow reach to the final, following a linear curve, to a fast reach of the final value, following a logarithmic curve. (Scale: -100 % / +100 %. Default: -50 %). Typically 75 - 90% for logarithmic curves.

3.2.2 Section 2: Amp Envelope Modulation matrix



The Amp Envelope panel has a one modulation matrix slot per section. Each modulation matrix slot has an amount knob and a source pop up menu. The modulation source display values:

1. Cons = Constant maximum value
2. Rnd = Random bipolar value between -1 and +1
3. Rnd+ = Random unipolar value between 0 and 1
4. PB = Pitch Bend, incoming MIDI pitch bend
5. Aft = Aftertouch, incoming MIDI channel pressure
6. MW= Modulation Wheel
7. Key = Keyboard position relative to C3. Value increases by 1.0 per octave
8. Vel = Velocity, incoming MIDI velocity
9. Amp = Amp Envelope curve shaped by the Delay, Attack, Hold, Decay, Sustain and Release settings
10. LFO = LFO or Low Frequency Oscillator
11. Md1 = Mod 1 Envelope curve shaped by the Attack, Hold, Decay, Sustain and Release settings in the Mod 1 Envelope section on the back panel
12. Md2 = Mod 2 Envelope curve shaped by the Attack, Hold, Decay, Sustain and Release settings in the Mod 2 Envelope section on the back panel

- **10: Envelope Attack Mod Amount** (Envelope Attack Mod Amount): Determines the amount of modulation applied to the Amp Envelope's Attack (Scale: -100 / 100. Default: 0).
- **11: Envelope Attack Mod Source display** (Envelope Attack Mod Source): Determines the modulation source applied to the Amp Envelope's Attack (Scale: Cons, Rnd, Rnd+, PB, Aft, MW, Key, Vel, Amp, LFO, Md1, Md2. Default: Vel).
- **12: Envelope Hold Mod Amount** (Envelope Hold Mod Amount): Determines the amount of modulation applied to the Amp Envelope's Hold (Scale: -100 / 100. Default: 0).
- **13: Envelope Hold Mod Source display** (Envelope Hold Mod Source): Determines the modulation source applied to the Amp Envelope's Hold (Scale: Cons, Rnd, Rnd+, PB, Aft, MW, Key, Vel, Amp, LFO, Md1, Md2. Default: Vel).
- **14: Envelope Decay Mod Amount** (Envelope Decay Mod Amount): Determines the amount of modulation applied to the Amp Envelope's Decay (Scale: -100 / 100. Default: 0).
- **15: Envelope Decay Mod Source display** (Envelope Decay Mod Source): Determines the modulation source applied to the Amp Envelope's Decay (Scale: Cons, Rnd, Rnd+, PB, Aft, MW, Key, Vel, Amp, LFO, Md1, Md2. Default: Vel).
- **16: Envelope Sustain Mod Amount** (Envelope Sustain Mod Amount): Determines the amount of modulation applied to the Amp Envelope's Sustain (Scale: -100 / 100. Default: 0).
- **17: Envelope Sustain Mod Source display** (Envelope Sustain Mod Source): Determines the modulation source applied to the Amp Envelope's Sustain (Scale: Cons, Rnd, Rnd+, PB, Aft, MW, Key, Vel, Amp, LFO, Md1, Md2. Default: Vel).

- **18: Envelope Release Mod Amount** (Envelope Release Mod Amount): Determines the amount of modulation applied to the Amp Envelope's Release (Scale: -100 / 100. Default: 0).
- **19: Envelope Release Mod Source display** (Envelope Release Mod Source): Determines the modulation source applied to the Amp Envelope's Release (Scale: Cons, Rnd, Rnd+, PB, Aft, MW, Key, Vel, Amp, LFO, Md1, Md2. Default: Vel).

3.3 Panel 3: LFO panel

A Low Frequency Oscillator does not produce sound in the audible range and is often used as a modulation source, whereby its shape and speed can be changed. Other modulation sources which can be shaped are the Amp Envelope (Amp) and the 2 Mod Envelopes (Mod1 and Mod2).

- **1: Shape – LFO Shape** (LFO_Shape): Determines the waveform for the LFO (Scale: Sine, Tri, Sqr, Saw, Rnd and Drft. Default: Sine).
- **2: Rate - LFO Rate** (LFO Rate): Determines the LFO rate or speed in Hz (Scale: 0,01 Hz / 15,85 Hz. Default: 1,00 Hz).
- **3: Trig - LFO Retrigger On Off** (LFO Retrigger On Off): When Off, all voices will be modulated together in sync. When On, the LFO for each voice starts (Scale: On / Off. Default: On).
- **4: Rate Mod - LFO Rate Mod Amount** (LFO Rate Mod Amount): Determines the amount of modulation applied to the LFO's Rate or speed (Scale: -100 / 100. Default: 0).
- **5: Rate Mod Source display - LFO Rate Mod Source (**LFO Rate Mod Source): Determines the modulation source applied to the LFO's Rate or speed (Scale: Cons, Rnd, Rnd+, PB, Aft, MW, Key, Vel, Amp, LFO, Md1, Md2. Default: Vel).

The modulation source display values:

1. Cons = Constant maximum value
2. Rnd = Random bipolar value between -1 and +1
3. Rnd+ = Random unipolar value between 0 and 1
4. PB = Pitch Bend, incoming MIDI pitch bend
5. Aft = Aftertouch, incoming MIDI channel pressure
6. MW= Modulation Wheel
7. Key = Keyboard position relative to C3. Value increases by 1.0 per octave
8. Vel = Velocity, incoming MIDI velocity
9. Amp = Amp Envelope curve shaped by the Delay, Attack, Hold, Decay, Sustain and Release settings
10. LFO = LFO or Low Frequency Oscillator
11. Md1 = Mod 1 Envelope curve shaped by the Attack, Hold, Decay, Sustain and Release settings in the Mod 1 Envelope section on the back panel

12. Md2 = Mod 2 Envelope curve shaped by the Attack, Hold, Decay, Sustain and Release settings in the Mod 2 Envelope section on the back panel

3.4 Panel 4: Audio Modulation panel

The Audio Modulation Panel has 2 sections: One with Ring (or Amplitude Modulation), Drive (or Shaper), Gain (or EQ) and a Low Pass Filter with Cut-off and Resonance (**1**). The second section is the Audio Modulation matrix (**2**).

3.4.1 Section 1: Ring

The Wave oscillator acts as a carrier and gets modulated by an internal sine oscillator. The Saw and Square Oscillators are not affected by Ring Modulation.

- **1: Ring - Ring Modulation Level** (Sine Osc AM On Off): Determines the level of the internal sine oscillator which performs Amplitude Modulation (or Ring Modulation) with the Wave Oscillator (Scale: 0 % / 100 %. Default: 0 %).
- **2: HM - Ring Modulation Harmonic** (Ring Modulation Harmonic): Determines whether the internal sine oscillator will perform Amplitude Modulation (or Ring Modulation) following a

harmonic scale in semitones with the Waveform oscillator (Scale: -36 semitones / +36 semitones. Default: 0 semitones).

- **3: DHM - Ring Modulation Disharmonic** (Ring Modulation Disharmonic): Determines whether the Sine oscillator will perform Amplitude Modulation (or Ring Modulation) following a disharmonic scale in Hz with the Waveform oscillator (Scale: 2 Hz / 20 kHz. Default: 263,7 Hz).
- **4: Level Mod - Ring Modulation Mod Amount** (Ring Modulation Mod Amount): Determines the amount of modulation applied to the Ring Modulator's (Scale: -100 / 100. Default: 0).
- **6: Ring Mod Source display - Ring Modulation Mod Source** (Ring Modulation Mod Source): Determines the modulation source applied to the Ring Modulation (Scale: Cons, Rnd, Rnd+, PB, Aft, MW, Key, Vel, Amp, LFO, Md1, Md2. Default: Vel).

The modulation source display values:

1. Cons = Constant maximum value
2. Rnd = Random bipolar value between -1 and +1
3. Rnd+ = Random unipolar value between 0 and 1
4. PB = Pitch Bend, incoming MIDI pitch bend
5. Aft = Aftertouch, incoming MIDI channel pressure
6. MW= Modulation Wheel
7. Key = Keyboard position relative to C3. Value increases by 1.0 per octave
8. Vel = Velocity, incoming MIDI velocity
9. Amp = Amp Envelope curve shaped by the Delay, Attack, Hold, Decay, Sustain and Release settings
10. LFO = LFO or Low Frequency Oscillator
11. Md1 = Mod 1 Envelope curve shaped by the Attack, Hold, Decay, Sustain and Release settings in the Mod 1 Envelope section on the back panel
12. Md2 = Mod 2 Envelope curve shaped by the Attack, Hold, Decay, Sustain and Release settings in the Mod 2 Envelope section on the back panel

3.4.2 Section 2: Drive or Shaper

Drive or Shaper is a very powerful sound shaping tool, providing fully customizable wave shaping, capable of producing distortion and harmonics.

- **1: Shaper Mode display** (Shaper Mode): Determines the way of wave shaping. (Scale: None, Clip, Sine and Crsh. Default: None).
- **2: Shaper Drive Mod Amount** (Shaper Drive Mod Amount): Determines the amount of modulation applied to the Drive or Shaper (Scale: -100 / 100. Default: 0).
- **6: Drive Mod Source display - Shaper Drive Mod Source** (Shaper Drive Mod Source): Determines the modulation source applied to the Drive or Shaper (Scale: Cons, Rnd, Rnd+, PB, Aft, MW, Key, Vel, Amp, LFO, Md1, Md2. Default: Cons).

The modulation source display values:

1. Cons = Constant maximum value
2. Rnd = Random bipolar value between -1 and +1
3. Rnd+ = Random unipolar value between 0 and 1
4. PB = Pitch Bend, incoming MIDI pitch bend
5. Aft = Aftertouch, incoming MIDI channel pressure
6. MW= Modulation Wheel
7. Key = Keyboard position relative to C3. Value increases by 1.0 per octave
8. Vel = Velocity, incoming MIDI velocity
9. Amp = Amp Envelope curve shaped by the Delay, Attack, Hold, Decay, Sustain and Release settings
10. LFO = LFO or Low Frequency Oscillator
11. Md1 = Mod 1 Envelope curve shaped by the Attack, Hold, Decay, Sustain and Release settings in the Mod 1 Envelope section on the back panel
12. Md2 = Mod 2 Envelope curve shaped by the Attack, Hold, Decay, Sustain and Release settings in the Mod 2 Envelope section on the back panel

3.4.3 Section 3: Gain or EQ

Gain or EQ is a single parametric equalizer band to cut or boost a desired frequency.

- **1: Gain** (EQ Gain): Determines the attenuation or boost. (Scale: -∞ / +12,0 dB. Default: -6,1 dB).
- **2: Q - EQ Band Width** (EQ Band Width): Determines the slope of the EQ left and right from the center frequency (Scale: 0,33 oct / 3,0 oct. Default: 1).
- **3: Freq - EQ Band Frequency** (EQ Band Frequency): Determines the center frequency of the EQ band (Scale: 0 % / 100 %. Default: 0 %).
- **4: Freq Mod - EQ Band Frequency Mod Amount** (EQ Band Frequency Mod Amount): Determines the amount of modulation applied to the EQ's Frequency (Scale: -100 / 100. Default: 0).
- **5: Source display - EQ Band Frequency Mod Source (**EQ Band Frequency Mod Source): Determines the modulation source applied to the Drive the EQ's frequency band (Scale: Cons, Rnd, Rnd+, PB, Aft, MW, Key, Vel, Amp, LFO, Md1, Md2. Default: Key).

The modulation source display values:

1. Cons = Constant maximum value
2. Rnd = Random bipolar value between -1 and +1
3. Rnd+ = Random unipolar value between 0 and 1
4. PB = Pitch Bend, incoming MIDI pitch bend
5. Aft = Aftertouch, incoming MIDI channel pressure

6. MW= Modulation Wheel
7. Key = Keyboard position relative to C3. Value increases by 1.0 per octave
8. Vel = Velocity, incoming MIDI velocity
9. Amp = Amp Envelope curve shaped by the Delay, Attack, Hold, Decay, Sustain and Release settings
10. LFO = LFO or Low Frequency Oscillator
11. Md1 = Mod 1 Envelope curve shaped by the Attack, Hold, Decay, Sustain and Release settings in the Mod 1 Envelope section on the back panel
12. Md2 = Mod 2 Envelope curve shaped by the Attack, Hold, Decay, Sustain and Release settings in the Mod 2 Envelope section on the back panel

3.4.4 Section 4: Low Pass 12 Filter

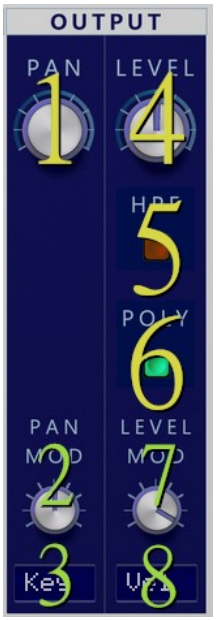
Gain or EQ is a single parametric equalizer band to cut or boost a desired frequency.

- **1: Cut - Low Pass 12 Cutoff** (Low Pass 12 Cutoff): Determines the cut-off frequency. (Scale: -20,0 Hz / 25 kHz. Default25 kHz).
- **2: Button - Low Pass 12 Filter On Off** (Low Pass 12 Filter On Off): Determines whether the filter is On or Off (Scale: On / Off. Default: On).
- **3: Key Track - Low Pass 12 Cutoff Key Track** (Low Pass 12 Cutoff Key Track): Determines the amount of modulation from the keyboard to the filter's cut-off frequency (Scale: -100 / +100. Default: 0).
- **4: Freq Mod - Low Pass 12 Cutoff Mod Amount** (Low Pass 12 Cutoff Mod Amount): Determines the amount of modulation applied to the Low Pass 12 Filter Frequency (Scale: -100 / 100. Default: 0).
- **5: Source display - Low Pass 12 Cutoff Mod Source (**Low Pass 12 Cutoff Mod Source): Determines the modulation source applied to applied to the Low Pass 12 Filter Frequency (Scale: Cons, Rnd, Rnd+, PB, Aft, MW, Key, Vel, Amp, LFO, Md1, Md2. Default: Cons).
- **6: Res - Low Pass 12 Resonance** (Low Pass 12 Resonance): Determines the filter's resonance. (Scale: 0 % / 100 %. Default: 0%).
- **7: Key Track - Low Pass 12 Resonance Key Track** (Low Pass 12 Resonance Key Track): Determines the amount of modulation from the keyboard to the filter's cut-off resonance (Scale: -100 / +100. Default: 0).
- **8: Res Mod - Low Pass 12 Resonance Mod Amount** (Low Pass 12 Resonance Mod Amount): Determines the amount of modulation applied to filter resonance (Scale: -100 / 100. Default: 0).
- **9: Source display - Low Pass 12 Resonance Mod Source (**Low Pass 12 Resonance Mod Source): Determines the modulation source applied to applied to Filter resonance (Scale: Cons, Rnd, Rnd+, PB, Aft, MW, Key, Vel, Amp, LFO, Md1, Md2. Default: Cons).

The modulation source display values:

1. Cons = Constant maximum value
2. Rnd = Random bipolar value between -1 and +1
3. Rnd+ = Random unipolar value between 0 and 1
4. PB = Pitch Bend, incoming MIDI pitch bend
5. Aft = Aftertouch, incoming MIDI channel pressure
6. MW= Modulation Wheel
7. Key = Keyboard position relative to C3. Value increases by 1.0 per octave
8. Vel = Velocity, incoming MIDI velocity
9. Amp = Amp Envelope curve shaped by the Delay, Attack, Hold, Decay, Sustain and Release settings
10. LFO = LFO or Low Frequency Oscillator
11. Md1 = Mod 1 Envelope curve shaped by the Attack, Hold, Decay, Sustain and Release settings in the Mod 1 Envelope section on the back panel
12. Md2 = Mod 2 Envelope curve shaped by the Attack, Hold, Decay, Sustain and Release settings in the Mod 2 Envelope section on the back panel

3.5 Panel 5: Output panel



- **1: Pan - Pan** (Pan): Determines the panning of the output (Scale: -50 Left / +50 Right. Default: 0).
- **2: Pan Mod - Pan Mod Amount** (Pan Mod Amount): Determines the amount of modulation applied panning (Scale: -100 / 100. Default: 0).
- **3: Source display - Pan Mod Source (**Pan Mod Source): Determines the modulation source applied to applied to panning (Scale: Cons, Rnd, Rnd+, PB, Aft, MW, Key, Vel, Amp, LFO, Md1, Md2. Default: Key).
- **4: Level - Master Level** (Master Level): Determines the master volume (Scale: -∞ / +12,0 dB. Default: -6,1 dB).
- **5: HF - HF High Pass 12 Filter On Off** (High Pass 12 Filter On Off): This corrects for high frequency loss due to sample playback interpolation (Scale: On / Off. Default: Off).
- **6: Poly - Poly On / Off** (Poly On Off): Select On if you want to play Rumbler Compact Synthesizer polyphonically. The maximum number of voices is 8 and the voice stealing is set to the oldest note. Select Off, if you want to play Rumbler Compact Synthesizer in monophonic mode and retrigger the envelopes as soon as you play a new note (Scale: On / Off. Default: On).
- **7: Level Mod - Master Level Mod Amount** (Master Level Mod Amount): Determines the amount of modulation applied to the master level (Scale: -100 / 100. Default: 100).

- **8: Source display - Master Level Mod Source (**Master Level Mod Source): Determines the modulation source applied to the master level (Scale: Cons, Rnd, Rnd+, PB, Aft, MW, Key, Vel, Amp, LFO, Md1, Md2. Default: Vel).

The modulation source display values:

1. Cons = Constant maximum value
2. Rnd = Random bipolar value between -1 and +1
3. Rnd+ = Random unipolar value between 0 and 1
4. PB = Pitch Bend, incoming MIDI pitch bend
5. Aft = Aftertouch, incoming MIDI channel pressure
6. MW= Modulation Wheel
7. Key = Keyboard position relative to C3. Value increases by 1.0 per octave
8. Vel = Velocity, incoming MIDI velocity
9. Amp = Amp Envelope curve shaped by the Delay, Attack, Hold, Decay, Sustain and Release settings
10. LFO = LFO or Low Frequency Oscillator
11. Md1 = Mod 1 Envelope curve shaped by the Attack, Hold, Decay, Sustain and Release settings in the Mod 1 Envelope section on the back panel
12. Md2 = Mod 2 Envelope curve shaped by the Attack, Hold, Decay, Sustain and Release settings in the Mod 2 Envelope section on the back panel

3.6 Panel 6: Chorus

The Chorus effect takes an audio signal and mix it with one or more delayed, pitch modulated copies.

- **Button Display - Chorus On / Off** (Chorus On Off): Determines whether chorus is added to the signal chain (Scale: On / Off. Default: On).
- **1: Rate - Chorus Rate** (Chorus Rate): Determines the modulation rate in Hz (Scale: 0,10 Hz / 10 Hz. Default: 1,00 Hz).
- **2: Dpth – Chorus Depth** (Chorus Depth): Determines the depth of the delay pitch modulation in milliseconds (Scale: 0 ms / 32 ms. Default: 8 ms).
- **3: Dly - Chorus Delay** (Chorus Delay): Determines the initial delay for each voice (Scale: 0 ms / 32 ms. Default: 8 ms).
- **4: Voice - Chorus Voices Amount** (Chorus Voices Amount): Determines the number of chorus voices (Scale: 1, 2 or 3 voices. Default: 3 voices).
- **6: Mix - Chorus Mix** (Chorus Mix): Determines the amount of chorus mixed with the original sound (Scale: 0 % / 100 %. Default: 0 %).

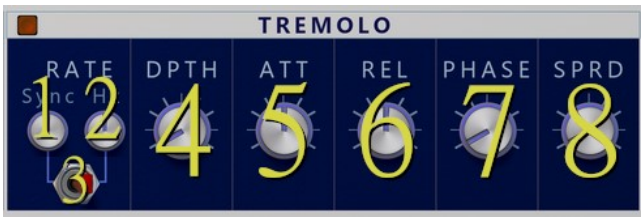
3.7 Panel 7: Delay

Stereo delay effect with adjustable feedback routing and left / right spread.

- **Button Display - Delay On / Off** (Delay On Off): Determines whether delay is added to the signal chain (Scale: On / Off. Default: On).

- **1: Time Sync- Delay Sync** (Delay Sync): Determines the time of the interval between repeats of the delay based on tempo in the sequencer (Scale: 1/16 bar / 1/1 bar. Default: 1/4 bar).
- **2: Time Sec- Delay Time** (Delay Time): Determines the time of the interval between repeats of the delay in seconds (Scale: 0 seconds / 4 seconds. Default: 1 second).
- **3: Toggle switch - Delay Sync On Off** (Delay Sync On Off): Toggles mode between a synced delay based on quarter notes and a delay in seconds (Scale: On / Off. Default: On).
- **4: Fbck - Delay Feedback** (Delay Feedback): Determines the number of repeats of the delay (Scale: 0 % / 100 %. Default: 50 %).
- **5: Ratio - Delay Ratio** (Delay Ratio): Determines the channel to reduce. Negative values reduce the left channel delay, positive values reduce the right channel delay (Scale: 50:100 / 100:50. Default: 100:50).
- **6: Damp - Delay Damping**(Delay Damping): Determines the progressive loss of high frequencies in the delay tail (Scale: 20 kHz / 1 kHz. Default: 20 kHz).
- **7: Mix - Delay Mix** (Delay Mix): Determines the amount of delay mixed with the original sound (Scale: 0 % / 100 %. Default: 0 %).

3.8 Panel 8: Tremolo / Pan



Apply tremolo and / or auto-pan effects.

- **Button Display - Tremolo On / Off** (Tremolo On Off): Determines whether tremolo is added to the signal chain (Scale: On / Off. Default: Off).
- **1: Rate Sync- Tremolo Sync** (Tremolo Sync): Determines the time of the interval between repeats of the tremolo based on tempo in the sequencer (Scale: 1/16 bar / 1/1 bar. Default: 1/4 bar).
- **2: Rate Sec- Tremolo Rate** (Tremolo Rate): Determines the time of the interval between repeats of the tremolo in Hz (Scale: 0,05 Hz / 20 Hz. Default: 1 Hz).
- **3: Toggle switch - Tremolo Sync On Off** (Tremolo Sync On Off): Switch the modulation rate between cycles per second (Hz) or cycles per beat (Scale: On / Off. Default: Off).
- **4: Dpth - Tremolo Depth** (Tremolo Depth): Adjust the amplitude modulation depth of the tremolo (Scale: 0 % / 100 %. Default: 0 %).
- **5: Att - Tremolo Attack** (Tremolo Attack): Adjust the attack length as a percentage of the 'on' time (Scale: 0 % / 100 %. Default: 50 %).
- **6: Phase - Tremolo Phase** (Tremolo Phase): Adjust the initial phase of the modulation relative to beat positions when sync is on (Scale: 0 % of 360 degrees / 100 % of 360 degrees. Default: 0 % of 360 degrees).
- **7: Sprd - Tremolo Spread** (Tremolo Spread): Adjust the phase of the right channel relative to the left, to add stereo width and create auto-pan effects (Scale: 0 % of 360 degrees / 100 % of 360 degrees. Default: 0 % of 360 degrees).

3.9 Panel 9: Distortion

Stereo distortion / overdrive effect.

- **Button Display - Distortion On Off** (Distortion On Off): Determines whether distortion is added to the signal chain (Scale: On / Off. Default: Off).
- **1: Mode - Distortion Mode** (Distortion Mode): Determines the distortion mode between Transistor (stereo hard clipping) or Tube (soft clipping with DC bias) (Scale: Trans / Tube. Default: Trans).
- **2: Drive - Distortion Drive** (Distortion Drive): Determines the input gain to the distortion (Scale: 0 % off 60 dB / 100 % off 60 dB. Default: 50 % off 60 dB).
- **3: Mod - Distortion Drive Mod Amount** (Distortion Drive Mod Amount): Determines the amount of modulation applied to the distortions drive (Scale: -100 / 100. Default: 0).
- **4: Source display - Distortion Drive Mod Source** (Distortion Drive Mod Source): Determines the modulation source applied to applied the master level (Scale: Cons, PB, Aft, MW. Default: Cons).
- **5: Rect - Distortion Rectify** (Distortion Rectify): Degree to which negative signal peaks are converted to positive (Scale: 0 % / 100 %. Default: 50 %).
- **6: Mod - Distortion Rectify Mod Amount** (Distortion Rectify Mod Amount): Determines the amount of modulation applied to the distortions rectify (Scale: -100 / 100. Default: 100).
- **7: Source display - Distortion Rectify Mod Source** (Distortion Rectify Mod Source): Determines the modulation source applied to the the distortions rectify (Scale: Cons, PB, Aft, MW. Default: Cons).
- **8: Mix - Distortion Mix** (Distortion Mix): Mix between dry and wet (Scale: 0 % / 100 %. Default: 0 %).
- **9: Mod - Distortion Mix Mod Amount** (Distortion Mix Mod Amount): Determines the amount of modulation applied to the distortions Mix (Scale: -100 / 100. Default: 0).
- **10: Source display - Distortion Mix Mod Amount** (Distortion Mix Mod Amount): Determines the modulation source applied to the distortions mix (Scale: Cons, PB, Aft, MW. Default: Cons).

The modulation source display values:

1. Cons = Constant maximum value
2. PB = Pitch Bend, incoming MIDI pitch bend
3. Aft = Aftertouch, incoming MIDI channel pressure
4. MW= Modulation Wheel

3.10 Panel 10: Convolution Reverb

A convolution reverb process the incoming audio with an impulse response, to add reverberation or the character of another audio device, acoustic space.

- **Button Display - Convolution On Off** (Convolution On Off): Determines whether the convolution reverb is added to the signal chain (Scale: On / Off. Default: Off).
- **1: Mode - Convolution Mode** (Convolution Mode): Determines the convolution type or impulse response. You can choose from several reverb rooms:
  1. Marshl
  2. Drums
  3. Kitchn
  4. Mesa

5. Spring
6. String
7. EMS
8. Holy
9. Clap
10. Vocal

(Default: EMS).

- **2: Pdel - Convolution Pre Delay** (Convolution Pre Delay): Determines the initial delay before reverb (Scale: 0 % / 100 %. Default: 0 %).
- **3: Mod - Convolution Pre Delay Mod Amount** (Convolution Pre Delay Mod Amount): Determines the amount of modulation applied to the reverbs pre delay (Scale: -100 / 100. Default: 0).
- **4: Source display - Convolution Pre Delay Mod Source** (Convolution Pre Delay Mod Source): Determines the modulation source applied to applied the reverbs pre (Scale: Cons, PB, Aft, MW. Default: Cons)
- **5: Qlty - Convolution Quality** (Convolution Quality): Determines the quality of the reverb. Reduce bandwidth to save CPU - should be set as low as possible without hearing artefacts (Scale: 0 % / 100 %. Default: 50 %).
- **6: Mod - Convolution Quality Mod Amount** (Convolution Quality Mod Amount): Determines the amount of modulation applied to the reverbs quality (Scale: -100 / 100. Default: 100).
- **7: Source display - Convolution Quality Mod Source** (Convolution Quality Mod Source): Determines the modulation source applied to the the reverbs quality (Scale: Cons, PB, Aft, MW. Default: Cons).
- **8: Wdth - Convolution Width** (Convolution Width): Reduce to mix the left and right inputs together before convolution (Scale: 0 % / 100 %. Default: 100 %).
- **9: Mod - Convolution Width Mod Amount** (Convolution Width Mod Amount): Determines the amount of modulation applied to the reverbs input width (Scale: -100 / 100. Default: 0).
- **10: Source display - Convolution Width Mod Source** (Convolution Width Mod Source): Determines the modulation source applied to the reverbs input width (Scale: Cons, PB, Aft, MW. Default: Cons).
- **11: Dec - Convolution Decay** (Convolution Decay): Applies a volume ramp (decreasing or increasing) to the impulse to adjust the perceived reverb time (Scale: 0 % off 18 dB per sec / 100 % off 18 dB per sec. Default: 50 % off 18 dB per sec).
- **12: Mix - Convolution Mix** (Convolution Mix): Mix between dry and wet signal (Scale: 0 / 100 %. Default: 0).
- **13: Mod - Convolution Mix Mod Amount** (Convolution Mix Mod Amount): Determines the amount of modulation applied to the reverbs mix (Scale: -100 / 100. Default: 0).
- **14: Source display - Convolution Mix Mod Source** (Convolution Mix Mod Source): Determines the modulation source applied to the reverbs mix (Scale: Cons, PB, Aft, MW. Default: Cons).

The modulation source display values:

1. Cons = Constant maximum value
2. PB = Pitch Bend, incoming MIDI pitch bend
3. Aft = Aftertouch, incoming MIDI channel pressure
4. MW= Modulation Wheel

3.11 Panel 11: Reverb

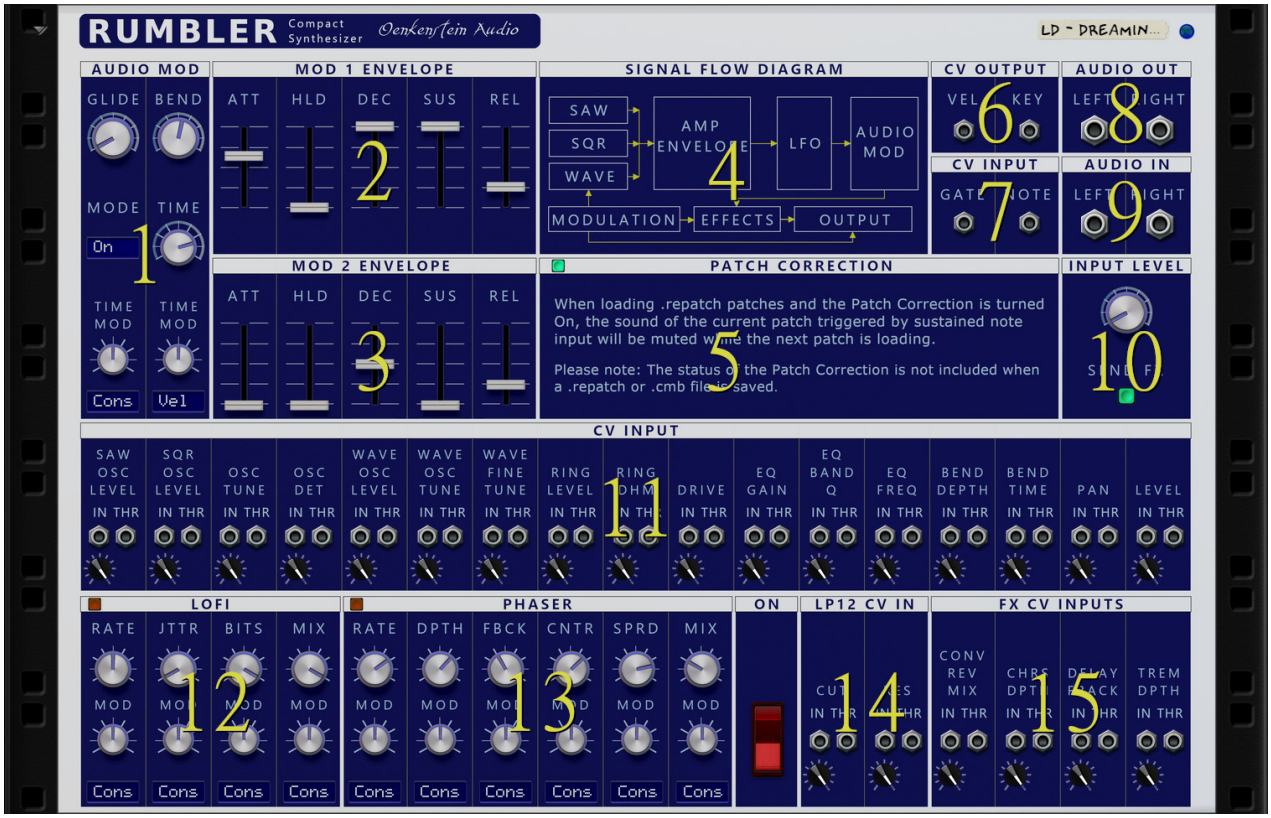
Algorithmic reverb, emulating a digital reverb unit.

- **Button Display - Reverb On Off** (Reverb On Off): Determines whether the linear reverb is added to the signal chain (Scale: On / Off. Default: Off).
- **1: Time - Reverb Time** (Reverb Time): Determines the length of reverb tail (Scale: 0 % / 100 %. Default: 50 %).
- **2: Mod - Reverb Time Mod Amount** (Reverb Time Mod Amount): Determines the amount of modulation applied to the reverbs time (Scale: -100 / 100. Default: 0).
- **3: Source display - Reverb Time Mod Source** (Reverb Time Mod Source): Determines the modulation source applied to the reverbs time (Scale: Cons, PB, Aft, MW. Default: Cons).
- **4: Pdel - Reverb Pre Delay** (Reverb Pre Delay): Determines the initial delay before reverb (Scale: 0 ms / 200 ms. Default: 0 ms).
- **5: Mod - Reverb Pre Delay Mod Amount** (Reverb Pre Delay Mod Amount): Determines the amount of modulation applied to the reverbs pre delay (Scale: -100 / 100. Default: 0).
- **6: Source display - Reverb Pre Delay Mod Source** (Reverb Pre Delay Mod Source): Determines the modulation source applied to applied the reverbs pre (Scale: Cons, PB, Aft, MW. Default: Cons).
- **7: Lcut - Reverb Low Cut** (Reverb Low Cut): Determines the highpass filter cutoff frequency (Scale: 20 Hz / 2 kHz %. Default: 20 Hz).
- **8: Mod - Reverb Low Cut Mod Amount** (Reverb Low Cut Mod Amount): Determines the amount of modulation applied to the reverbs low cut (Scale: -100 / 100. Default: 0).
- **9: Source display - Reverb Low Cut Mod Source** (Reverb Low Cut Mod Source): Determines the modulation source applied to the the reverbs low cut (Scale: Cons, PB, Aft, MW. Default: Cons).
- **10: Hcut - Reverb High Cut** (Reverb High Cut): Determines the lowpass filter cutoff frequency (Scale: 20 kHz / 2 kHz. Default: 20 kHz).
- **11: Mod - Reverb High Cut Mod Amount** (Reverb High Cut Mod Amount): Determines the amount of modulation applied to the reverbs high cut (Scale: -100 / 100. Default: 0).
- **12: Source display - Reverb High Cut Mod Source** (Reverb High Cut Mod Source): Determines the modulation source applied to the reverbs high cut (Scale: Cons, PB, Aft, MW. Default: Cons).
- **13: Damp - Reverb Damping** (Reverb Damping): Determines the progressive loss of high frequencies in the reverb tail (Scale: 20 kHz / 2 kHz. Default: 20 kHz).
- **14: Mod - Reverb Damping Mod Amount** (Reverb Damping Mod Amount): Determines the amount of modulation applied to the reverbs damping (Scale: -100 / 100. Default: 0).
- **15: Source display - Reverb Damping Mod Source** (Reverb Damping Mod Source): Determines the modulation source applied to the reverbs damping (Scale: Cons, PB, Aft, MW. Default: Cons).
- **16: Mix - Reverb Mix** (Reverb Mix): Mix between dry and wet signal (Scale: 0 / 100 %. Default: 0).
- **17: Mod - Reverb Mix Mod Amount** (Reverb Mix Mod Amount): Determines the amount of modulation applied to the reverbs mix (Scale: -100 / 100. Default: 0).
- **18: Source display - Reverb Mix Mod Source** (Reverb Mix Mod Source): Determines the modulation source applied to the reverbs mix (Scale: Cons, PB, Aft, MW. Default: Cons).

The modulation source display values:

1. Cons = Constant maximum value
2. PB = Pitch Bend, incoming MIDI pitch bend
3. Aft = Aftertouch, incoming MIDI channel pressure
4. MW= Modulation Wheel

4 Back of the device



4.1 Panels overview

- **Logo**
- **Device name.**
- **MIDI Note indicator**
- **Audio Mod** Panel (1) with
  - Glide
  - Bend
- **Mod 1 Envelope** panel (2) with:
  - Attack, Hold, Decay, Sustain and Release (AHDSR)
- **Mod 2 Envelope** panel (3) with:
  - Attack, Hold, Decay, Sustain and Release (AHDSR)
- **Signal Flow Diagram** panel (4)
- **Patch Correction** panel (5)
- **CV Output** panel (6)
- **CV Input** panel (7)
- **Audio Out** panel (8)
- **Audio In** panel (9)
- **Input Level** panel (10)
- **CV Input** panel (11)
- **LoFi** panel (12) with:
  - Rate
  - Jitter
  - Bits
  - Mix dry / wet
- **Phaser** panel (13)
  - Rate
  - Depth
  - Feedback
  - Center

  - Spread
  - Mix dry / wet
- **Power Switch** decoration
- **LP12 CV In** panel (14)
- **FX CV Inputs** panel (15)

5 Panels

Rumbler Compact Synthesizer is divided in panels, each with one or more sections. A section uses and displays a set of various controllers like rotating knobs, display's, pop up menus, On / Off buttons and faders. Some panels have modulation slots.

5.1 Panel 1: Audio Mod

5.1.1 Section 1: Glide

Glide or Portamento makes note pitch glide from previous notes to new ones.

- **1: 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).
- **2: Mode - Glide Mode**: Switches pitch glide Off, On or Auto (only glides if a key is already held). Default is On.
  - When Off there will be no glide.
  - When On or Auto the pitch will glide between consecutive notes.
- **3: Time Mod - Glide Time Mod Amount**: Determines whether the Glide Time modulation is added to the signal chain (Scale: On / Off. Default: On).
- **4: Mod Display - Glide Time Mod Source**: Determines the source for the Glide modulation (Scale: Cons, Rnd, Rnd+, PB, Aft, MW, Key, Vel, Amp, LFO, Md1, Md2. Default: Cons).

5.1.2 Section 2: Bend

Bend bends the pitch of a note.

- **5: Depth - Bend Depth**: Determines how much the pitch alters as each key is struck (Scale: -50 / +50. Default: 0).
- **6: Time - Bend Time** (Auto Bend Time): Determines the time for the auto bend (Scale: 0 seconds / 16 seconds. Default: 63,2 milliseconds or 25).
- **7: Time Mod – Bend Time Mod Amount**: Determines whether the bend time modulation is added to the signal chain (Scale: On / Off. Default: On).

- **8: Mod Display - Bend Time Mod Source**: Determines the source for the bend time modulation (Scale: Cons, Rnd, Rnd+, PB, Aft, MW, Key, Vel, Amp, LFO, Md1, Md2. Default: Cons).

The modulation source display values:

1. Cons = Constant maximum value
2. Rnd = Random bipolar value between -1 and +1
3. Rnd+ = Random unipolar value between 0 and 1
4. PB = Pitch Bend, incoming MIDI pitch bend
5. Aft = Aftertouch, incoming MIDI channel pressure
6. MW= Modulation Wheel
7. Key = Keyboard position relative to C3. Value increases by 1.0 per octave
8. Vel = Velocity, incoming MIDI velocity
9. Amp = Amp Envelope curve shaped by the Delay, Attack, Hold, Decay, Sustain and Release settings
10. LFO = LFO or Low Frequency Oscillator
11. Md1 = Mod 1 Envelope curve shaped by the Attack, Hold, Decay, Sustain and Release settings in the Mod 1 Envelope section on the back panel
12. Md2 = Mod 2 Envelope curve shaped by the Attack, Hold, Decay, Sustain and Release settings in the Mod 2 Envelope section on the back panel

5.2 Panel 2: Mod 1 Envelope

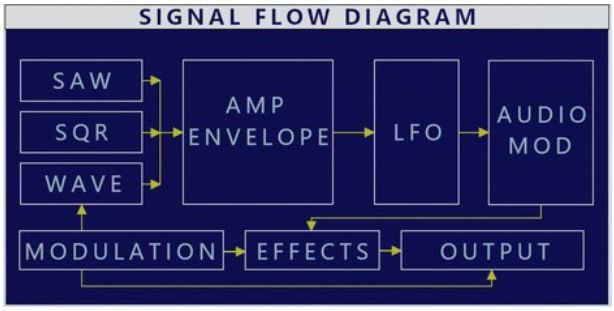
- **1: Att – Mod Envelope Attack**: Determines the time that a sound takes to peak. When you press a key on your keyboard, the envelope is triggered. The attack parameter then controls how long it should take before the controlled parameter (pitch or filter) reaches the maximum value, when you press a key. By setting attack to a value of 0, the destination parameter would reach the maximum value instantly. By raising the Mod Envelope Attack parameter, the value will instead slowly slide to its maximum (Scale: 0 seconds / 16 seconds. Default: 0 seconds).
- **3: Hold – Mod Envelope Hold**: Determines how long the controlled parameter should stay at its maximum value before starting to decrease again. This can be used in combination with the Mod Envelope Attack and Mod Envelope Decay parameters to make a value reach its maximum level, stay there for a while (Mod Envelope Hold) and then start dropping gradually down to the Mod Envelope Sustain level (Scale: 0 seconds / 16 seconds. Default: 0 seconds).
- **4: Dec – Mod Envelope Decay**: Determines the time that the sound takes to fall from the peak to the Mod Envelope Sustain level. After the maximum value for a destination has been reached and the Mod Envelope Hold time has expired, the controlled parameter will start to gradually drop down to the Mod Envelope Sustain level. How long it should take before it reaches the Mod Envelope Sustain level is controlled with the Mod Envelope Decay parameter. If the Mod Envelope Decay is set to 0, the value will immediately drop down to the Mod Envelope Sustain level (Scale: 0 seconds / 16 seconds. Default: 400 ms or 50).
- **5: Sus – Mod Envelope Sustain**: Determines the volume (relative to the peak) when the key is held down. The Mod Envelope Sustain parameter determines the value the Mod Amp Envelope should drop back to after the Mod Envelope Decay. If you set Mod Envelope Sustain to full level however, the Mod Envelope Decay setting doesn't matter since the value will never decrease. A combination of Mod Envelope Decay and Mod Envelope Sustain can be used for creating envelopes that rise up to the maximum value, then gradually decrease to, and stay on a level somewhere in-between zero and maximum (Scale: -∞ / 0 dB. Default: -∞ dB).

- **6: Rel – Mod Envelope Release**: Determines the time the sound takes to die out after the key is released. This works just like the Mod Envelope Decay parameter, with the exception that it determines the time it takes for the value to fall back to zero after the key is released (Scale: 0 seconds / 16 seconds. Default: 63,2 ms or 25).

5.3 Panel 3: Mod 2 Envelope

Works as Mod 1 Envelope (see above)

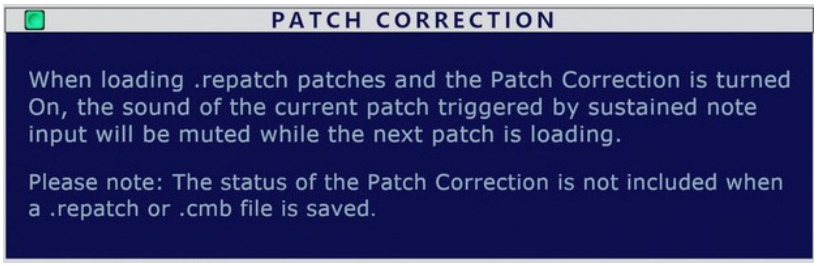
5.4 Panel 4: Signal Flow Diagram



The level output of the Saw and Square oscillators are connected and sums into the Wave oscillator. Please note: If you change the Level on the Wave oscillator, the level of the Saw and Square oscillators will change as well.

The sum of the Oscillators panel will pass through the Amp Envelope panel, the LFO panel, the Audio Modulation panel and then goes through the 8 effects panels to end in the Output Panel.

5.5 Panel 6: Patch Correction



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. It also mutes the Wave Oscillator playback when a new Waveform is selected with the Wave Select (Scale: On / Off. Default: On).

Please note: The status of the Patch Correction is not included when a .repatch or .cmb file is saved. Also, 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.

5.6 Panel 6: CV Output

Control Voltage (CV) Output. The Velocity (**1**) and the position of the Key (**2**) of your MIDI controller are translated into unipolar control voltage.

5.7 Panel 7: CV Input Gate and Note

Control Voltage (CV) Input for Gate (**1**) and Note (**2**).

5.8 Panel 8: Audio Out

These are the main audio Left (1) and Right (2) outputs. When you create a new Rumbler Compact Synthesizer device, these outputs are auto-routed to the first available channel in the Reason main mixer.

5.9 Panel 9: Audio In

New to the Rumbler series is the implementation of Audio Input. The connected device will pass through all the 8 Rumbler Compact Synthesizer effects. It makes Rumbler besides a synthesizer also a unique effects processor.

5.10 Panel 10: Input Level

Determines how a connected device to the Audio Input will behave.

- **1: Knob - Input Level**: Determines the volume of the connected device send to the Rumbler effects (Scale: -∞ / 12,0 dB. Default: -6.1 dB).
- **2: Send FX – Input Send FX On Off**: Determines if the connected device will make use of the Rumbler effects (Scale: On / Off. Default: On).

5.11 Panel 11: CV Input Synthesizer

Also new to the Rumbler series is the addition of CV In (**In**) and CV Through (**Thr**) for controllers on both the synthesizer and effects. There are 17 CV In and CV Thr to add extra modulation to the following controllers on the synthesizer part of Rumbler.

1. Saw Oscillator Level
2. Square Oscillator Level
3. Saw and Square Oscillator Tune
4. Saw and Square Oscillator Detune
5. Wave Oscillator Level
6. Wave Oscillator Tune
7. Wave Oscillator Fine Tune
8. Ring Modulation Level
9. Ring Modulation Disharmonic Tuning
10. Drive (Level)
11. EQ Gain
12. EQ Band Q or EQ Band Width
13. EQ Frequency
14. Bend Depth
15. Bend Time
16. Pan
17. Master Level

5.12 Panel 12: Lofi

The Lofi effect emulates degraded audio quality (Downsample / Rate Crusher) and can be used as a noise generator.

- **Button Display - Lofi On / Off** (Lofi On Off): Determines whether lofi is added to the signal chain (Scale: On / Off. Default: Off).
- **1: Rate - Lofi Sample Rate**: Determines the down sampling rate (Scale: 2 kHz / 50 kHz. Default: 10 kHz).
- **2: Mod - Lofi Sample Rate Mod Amount**: Determines the amount of modulation applied to the lofi's sample rate (Scale: -100 / 100. Default: 0).
- **3: Source display - Lofi Sample Rate Mod Source**: Determines the modulation source applied to the lofi's sample rate (Scale: Cons, PB, Aft, MW. Default: Cons).
- **4: Jitter - Lofi Jitter**: Determines the random modulation of the down sampling rate (Scale: 0 % / 100 %. Default: 0 %).
- **5: Mod - Lofi Jitter Mod Amount**: Determines the amount of modulation applied to the lofi's jitter (Scale: -100 / 100. Default: 0).
- **6: Source display - Lofi Jitter Mod Source**: Determines the modulation source applied to the lofi's jitter (Scale: Cons, PB, Aft, MW. Default: Cons).
- **7: Bits - Lofi Bit Depth**: Determines the amount of bit reduction (Scale: 0 % off 16 bits / 100 % off 16 bits. Default: 100 % off 16 bits).
- **8: Mod - Lofi Bit Depth Mod Amount**: Determines the amount of modulation applied to the lofi's bit reduction (Scale: -100 / 100. Default: 0).
- **9: Source display - Lofi Bit Depth Mod Source**: Determines the modulation source applied to the lofi's bit reduction (Scale: Cons, PB, Aft, MW. Default: Cons).
- **10: Mix - Lofi Mix**: Determines the amount of lofi mixed with the original sound (Scale: 0 % / 100 %. Default: 100 %).

- **11: Mod - Lofi Mix Mod Amount**: Determines the amount of modulation applied to the lofi's mix (Scale: -100 / 100. Default: 0).
- **12: Source display - Lofi Mix Mod Source**: Determines the modulation source applied to the lofi's mix (Scale: Cons, PB, Aft, MW. Default: Cons).

5.13 Panel 13: Phaser

The Phaser effect is used to filter the signal by creating a series of peaks and troughs in the frequency spectrum. The position of the peaks and troughs of the waveform being affected are modulated so that they vary over time, creating a sweeping effect.

- **Button Display - Phaser On / Off** (Phaser On Off): Determines whether phaser is added to the signal chain (Scale: On / Off. Default: Off).
- **1: Rate - Phaser Rate**: Determines the modulation rate of the phaser (Scale: 0,01 Hz / 10 Hz. Default: 1 Hz).
- **2: Mod - Phaser Rate Mod Amount**: Determines the amount of modulation applied to the phaser rate (Scale: -100 / 100. Default: 0).
- **3: Source display - Phaser Rate Mod Source**: Determines the modulation source applied to the phaser rate (Scale: Cons, PB, Aft, MW. Default: Cons).
- **4: Dpth - Phaser Depth**: Determines the filter frequency modulation of the phaser (Scale: 0 % / 100 %. Default: 50 %).
- **5: Mod - Phaser Depth Mod Amount**: Determines the amount of modulation applied to the phaser depth (Scale: -100 / 100. Default: 0).
- **6: Source display - Phaser Depth Mod Source**: Determines the modulation source applied to the phaser depth (Scale: Cons, PB, Aft, MW. Default: Cons).
- **7: Fbck - Phaser Feedback**: Determines the amount of feedback (Scale: 0 % / 100 %. Default: 50 %).
- **8: Mod - Phaser Feedback Mod Amount**: Determines the amount of modulation applied to the phaser feedback (Scale: -100 / 100. Default: 0).
- **9: Source display - Phaser Feedback Mod Source**: Determines the modulation source applied to the phaser feedback (Scale: Cons, PB, Aft, MW. Default: Cons).
- **10: Cntr - Phaser Center**: Determines the center filter frequency of the phaser (Scale: 100 Hz / 10 Khz. Default: 1 kHz).
- **11: Mod - Phaser Center Mod Amount**: Determines the amount of modulation applied to the phaser center filter frequency (Scale: -100 / 100. Default: 0).
- **12: Source display - Phaser Center Mod Source**: Determines the modulation source applied to the phaser center filter frequency (Scale: Cons, PB, Aft, MW. Default: Cons).
- **13: Sprd - Phaser Spread**: Determines the offset between left and right center frequencies (Scale: 0 % / 100 %. Default: 50 %).
- **14: Mod - Phaser Spread Mod Amount**: Determines the amount of modulation applied to the phaser spread (Scale: -100 / 100. Default: 0).
- **15: Source display - Phaser Spread Mod Source**: Determines the modulation source applied to the phaser spread (Scale: Cons, PB, Aft, MW. Default: Cons).
- **16: Mix - Phaser Mix**: Determines amount of phaser added to the signal chain (Scale: 0 % / 100 %. Default: 50 %).
- **17: Mod - Phaser Mix Mod Amount**: Determines the amount of modulation applied to the phaser mix (Scale: -100 / 100. Default: 0).

- **19: Source display - Phaser Mix Mod Source**: Determines the modulation source applied to the phaser mix (Scale: Cons, PB, Aft, MW. Default: Cons).

5.14 Panel 14: LP12 CV In

There are 2 CV In and CV Thr to add extra modulation to the Low Pass 12 Filter of Rumbler.

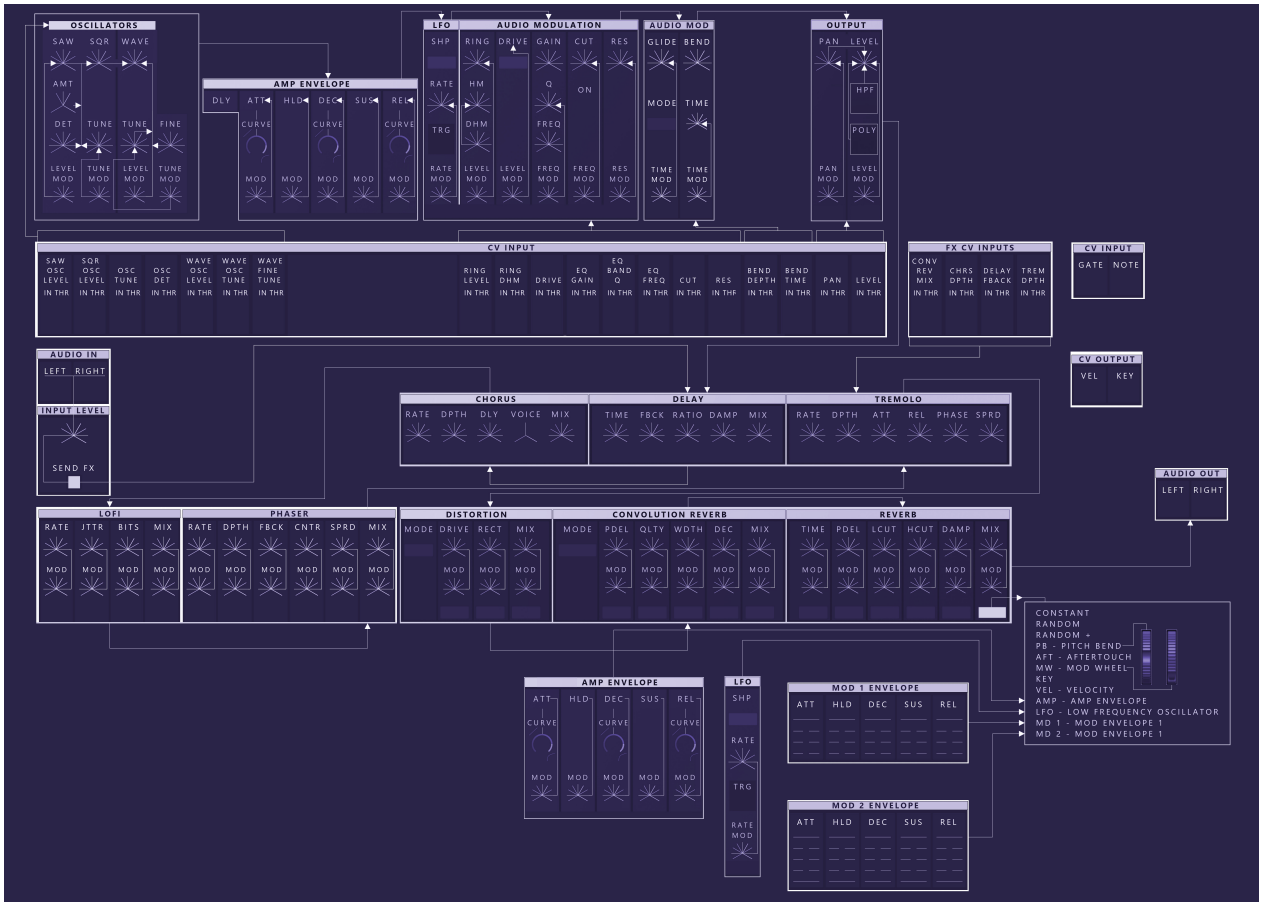
1. Low Pass 12 Filter Cutoff
2. Low Pass 12 Filter Resonance

5.15 Panel 15: FX CV Inputs

There are 4 CV In and CV Thr to add modulation to the following controllers on the effects part of Rumbler:

1. Convolution Reverb Mix
2. Chorus Depth
3. Delay Feedback
4. Tremolo Depth

6 Signal Flow Diagram



7 Waveforms

A list of all the waveforms to use in the Wave Oscillator:

001 Sine
002 Sqr
003 Saw
004 Wht
005 Pink
006 Brwn
007 None
008 Stat
009 French Horn
010 String
011 String
012 String Pad
013 Piano 1
014 El Grand
015 E Piano 1
016 E Piano 2
017 E Piano 3

018 Clavi
019 Vibe
020 A Guitar
021 F Guitar 1
022 F Guitar 2
023 Ac Bass 1
024 Ac Bass 2
025 Digi Bass 1
026 Pick Bass
027 Digi Bass 2
028 Round Bass
029 Fretless 1
030 Fretless 2
031 Flute
032 Panflute
033 Harmonica
034 Glocken
035 Tine
036 Harp
037 Marimba
038 E Tom
039 Log Drum
040 Jazz Organ 1
041 Mello Pad
042 Synth Solo
043 Synth 2
044 French Horn 1
045 French Horn 2
046 Brass 1
047 Brass 2
048 Brass 3
049 Brass 4
050 Trumpet 1
051 Trumpet 2
052 Violin
053 String
054 Piano 1
055 Piano 2
056 Piano 3
057 Piano 2 - 1
058 Piano 3 - 1
059 Piano 4 - 1
060 Piano 4 - 2
061 El Grand
062 E Piano 1
063 E Piano 2
064 E Piano 2 - 1
065 Clavi
066 Harpsichord
067 Vibe
068 A Guitar

069 F Guitar
070 Strat 1
071 Strat 2
072 Ac Bass
073 Pull Bass 1
074 Pull Bass 2
075 Round Bass
076 Slap Bass 1
077 Slap Bass 2
078 Slap Bass 3
079 Fretless 1
080 Fretless 2
081 Synth Bass 1
082 Synth Bass 2
083 Harmonica
084 Clarinet 1
085 Clarinet 2
086 Oboe 1
087 Oboe 2
088 Shakuhachi
089 Oriental Bell 1
090 Oriental Bell 2
091 Bell
092 Koto
093 Sitar
094 E Tom
095 Log Drum 1
096 Log Drum 2
097 Steel Drum 1
098 Steel Drum 2
099 Voice 1
100 Voice 2
101 Accordion 1
102 Accordion 2
103 Jazz Organ 2
104 Rock Organ 1
105 Draw Bar 1
106 Draw Bar 2
107 Pipe Organ 1
108 Pipe Organ 2
109 Rock Organ 2
110 Synth Solo 1
111 Synth Solo 2
112 Synth 2 - 1
113 Synth 2 - 2
114 Synth 3
115 Brass 1
116 Brass 2
117 Orchestra
118 Piano 1
119 Piano 4

120 E Piano 1 - 1 E + 12 Cents
121 E Piano 1 - 2 Ais
122 E Piano 2
123 E Piano 3
124 Clavi
125 Harpsichord 1
126 Harpsichord 2
127 Vibe Dis + 2 Cents
128 Digi Bass 1
129 Digi Bass 2 - 1
130 Digi Bass 2 - 2
131 Pick Bass
132 Glocken 1 E + 15 Cents
133 Glocken 2 G
134 Tine 1 Ais + 25 Cents
135 Tine 2 Fis + 35 Cents
136 Tine 3
137 Tube Bell 1
138 Tube Bell 2
139 Tube Bell 3 C + 28 Cents
140 Xylophone 1 E + 8 Cents
141 Xylophone 2 G
142 Harp E
143 Koto
144 Sitar 1
145 Sitar 2
146 Kalimba 1 Ais + 33 Cents
147 Kalimba 2
148 Kalimba 3 B - 50 Cents
149 Log Drum
150 Steel Drum Ais + 13 Cents
151 Pipe Organ 3 - 1
152 Pipe Organ 3 - 2
153 Synth 1 Cis - 46 Cents
154 Synth 2 Dis - 26 Cents
155 Synth 3 - 1 Cis + 40 Cents
156 Synth 3 - 2
157 Synth 4 - 1
158 Synth 4 - 2
159 Clavi
160 Digi Bass 1 - 1
161 Digi Bass 1 - 2
162 Pick Bass 1
163 Pick Bass 2
164 Round Bass 1
165 Round Bass 2 Gis - 16 Cents
166 Harmonica 1
167 Harmonica 2 Cis - 20 Cents
168 Harp
169 Koto
170 Sitar

171 Marimba C + 45 Cents
172 Synth 1
173 Bass Drum *
174 Ac Snare *
175 Tight Snare *
176 E Snare *
177 Rim *
178 Ac Tom *
179 H Hat *
180 Crash *
181 Ride *
182 Strat Guitar C - 30 Cents *
183 Fuzz Mute *
184 A Guitar *
185 F Guitar *
186 Guitar Harmo
187 Pull Bass
188 Bass Harmo
189 Bowed String *
190 String Attack *
191 String Sus *
192 Pizzicato *
193 Piano *
194 El Grand *
195 Piano Noise *
196 Trumpet *
197 Shakuhachi Attack *
198 Shakuhachi Sus *
199 Pan Flute Attack *
200 Pan Flute Sus *
201 Voice *
202 White Noise *
203 String Loop C - 15 Cents
204 Shakuhachi Loop C - 18 Cents
205 Pan Flute Loop
206 Voice Loop
207 White Noise Loop
208 Ac Snare Loop
209 F Guitar Loop
210 Pull Bass Loop
211 Omnibus Loop 1
212 Omnibus Loop 2
213 Omnibus Loop 3
214 Omnibus Loop 4
215 Omnibus Loop 5
216 Omnibus Loop 6
217 Omnibus Loop 7
218 Omnibus Loop 8
219 Ac Snare Rev *
220 Ac Tom Rev *
221 F Guitar Rev

222 H Hat Alt Loop
223 Crash Alt Loop
224 Piano Noise Alt Loop
225 Inverse Saw C
226 Triangle C
227 Random C
228 Snare White *

*** Waveforms without mentioning a note like Dis (or D#) behind their name are all tuned C3. Some waveform names like '120 E Piano 1 -1 + 12 Cents' have a number (+12) behind their name followed by the word 'Cents'. The number indicates the Fine Tune correction needed measured in Cents (-2) to make the Waveform sound in tune with the Waveforms names note (E).**

*** Waveforms marked with an * behind the name are one shot waveforms. All the others are looped waveforms.**

8 Patch List

List of all the patches released with the Rumbler Compact Synthesizer Rack Extension. Included are all the 64 single and 32 multi instrument patches from the Kawai K1 ROM pack D, drum kits patches and signature patches made by various sound designers.

8.1 The sound designers

- Loque (LQ)
- Oenkenstein (Oenk)

8.2 Folder structure

1 Bass
2 Combinator
3 Drums
4 Effects
5 Experimental
6 Keys
7 LD - Dreaming Strings.repatch
8 Lead
9 Pad
10 Wave Oscillators
11 Bass\BA - Bass Feedback MW.repatch
12 Bass\BA - Basso.repatch
13 Bass\BA - Bite Bass.repatch
14 Bass\BA - Bottom.repatch
15 Bass\BA - Da Bass - LQ.repatch
16 Bass\BA - Double Bass.repatch
17 Bass\BA - Round Bass (RM) - LQ.repatch
18 Bass\BA - Round Bass - LQ.repatch
19 Bass\BA - Slap.repatch
20 Bass\BA - Soft Bass.repatch
21 Bass\BA - Wassenaar.repatch
22 Bass\BA - Wood Bass.repatch
23 Bass\BA - Wowbbler - LQ.repatch
24 Combinator\001 Kawai K1 Single Instruments
25 Combinator\002 Kawai K1 Multi Instruments
26 Combinator\003 Reason 12 or higher
27 Combinator\CT - Saw - LQ.cmb

28 Combinator\CT - Square - LQ.cmb
29 Combinator\DR - Big Fat Kick Drum RUN.cmb
30 Combinator\DR - Drum Kit.cmb
31 Combinator\DR - Snare.cmb
32 Combinator\EX - Bass Gutter RUN.cmb
33 Combinator\PD - Pluck Pad.cmb
34 Combinator\001 Kawai K1 Single Instruments\4 Osc Init.cmb
35 Combinator\001 Kawai K1 Single Instruments\SiA-1 Asylum.cmb
36 Combinator\001 Kawai K1 Single Instruments\SIA-1 Jakaah Ahn.cmb
37 Combinator\001 Kawai K1 Single Instruments\SIA-2 Cembaharp.cmb
38 Combinator\001 Kawai K1 Single Instruments\SiA-2 Etherharp4.cmb
39 Combinator\001 Kawai K1 Single Instruments\SiA-3 I Am Falling.cmb
40 Combinator\001 Kawai K1 Single Instruments\SIA-3 Xylimba.cmb
41 Combinator\001 Kawai K1 Single Instruments\SIA-4 Islands 1.cmb
42 Combinator\001 Kawai K1 Single Instruments\SiA-4 Moonraker.cmb
43 Combinator\001 Kawai K1 Single Instruments\SiA-5 Kalyre Sin.cmb
44 Combinator\001 Kawai K1 Single Instruments\SIA-5 Staccato.cmb
45 Combinator\001 Kawai K1 Single Instruments\SIA-6 RealRhodes.cmb
46 Combinator\001 Kawai K1 Single Instruments\SiA-6 Synthicord.cmb
47 Combinator\001 Kawai K1 Single Instruments\SiA-7 Go4Baroque.cmb
48 Combinator\001 Kawai K1 Single Instruments\SIA-7 Strings Hi.cmb
49 Combinator\001 Kawai K1 Single Instruments\SiA-8 CirrusLuft.cmb
50 Combinator\001 Kawai K1 Single Instruments\SIA-8 Lil Italy.cmb
51 Combinator\001 Kawai K1 Single Instruments\SiB-1 MusicBoxSq.cmb
52 Combinator\001 Kawai K1 Single Instruments\SIB-1 Syn Pad A1.cmb
53 Combinator\001 Kawai K1 Single Instruments\SiB-2 FantaSynth.cmb
54 Combinator\001 Kawai K1 Single Instruments\SIB-2 NevrLetDwn.cmb
55 Combinator\001 Kawai K1 Single Instruments\SIB-3 Organ 1999.cmb
56 Combinator\001 Kawai K1 Single Instruments\SiB-3 Synth Pod.cmb
57 Combinator\001 Kawai K1 Single Instruments\SIB-4 Lead Organ.cmb
58 Combinator\001 Kawai K1 Single Instruments\SiB-4 RingModPiano.cmb
59 Combinator\001 Kawai K1 Single Instruments\SIB-5 Paradise.cmb
60 Combinator\001 Kawai K1 Single Instruments\SiB-5 Suspense.cmb
61 Combinator\001 Kawai K1 Single Instruments\SiB-6 Mallets.cmb
62 Combinator\001 Kawai K1 Single Instruments\SIB-6 StrngRhodes.cmb
63 Combinator\001 Kawai K1 Single Instruments\SIB-7 Digi Keys.cmb
64 Combinator\001 Kawai K1 Single Instruments\SiB-7 Dokari.cmb
65 Combinator\001 Kawai K1 Single Instruments\SIB-8 Flute Lead.cmb
66 Combinator\001 Kawai K1 Single Instruments\SiB-8 Zabala.cmb
67 Combinator\001 Kawai K1 Single Instruments\SiC-1 Intrigue.cmb
68 Combinator\001 Kawai K1 Single Instruments\SIC-1 SpaceTines.cmb
69 Combinator\001 Kawai K1 Single Instruments\SIC-2 FenderElec.cmb
70 Combinator\001 Kawai K1 Single Instruments\SiC-2 GabrielVox.cmb
71 Combinator\001 Kawai K1 Single Instruments\SiC-3 Cyclotron.cmb
72 Combinator\001 Kawai K1 Single Instruments\SIC-3 Grunge Bow.cmb
73 Combinator\001 Kawai K1 Single Instruments\SIC-4 Chiffit.cmb
74 Combinator\001 Kawai K1 Single Instruments\SiC-4 Orch Ensem.cmb
75 Combinator\001 Kawai K1 Single Instruments\SiC-5 Bellzy.cmb
76 Combinator\001 Kawai K1 Single Instruments\SIC-5 Tubular.cmb
77 Combinator\001 Kawai K1 Single Instruments\SiC-6 Metal x Mode.cmb
78 Combinator\001 Kawai K1 Single Instruments\SIC-6 Tine Harp.cmb
79 Combinator\001 Kawai K1 Single Instruments\SIC-7 Fender Bass.cmb
80 Combinator\001 Kawai K1 Single Instruments\SiC-7 PeopleRppl.cmb
81 Combinator\001 Kawai K1 Single Instruments\SIC-8 Dance Bass.cmb

82 Combinator\001 Kawai K1 Single Instruments\SiC-8 Mirror Chym.cmb
83 Combinator\001 Kawai K1 Single Instruments\SiD-1 Mirror Rthm.cmb
84 Combinator\001 Kawai K1 Single Instruments\SID-1 Square Pad.cmb
85 Combinator\001 Kawai K1 Single Instruments\SiD-2 Fat Man.cmb
86 Combinator\001 Kawai K1 Single Instruments\SID-2 Sample Pad.cmb
87 Combinator\001 Kawai K1 Single Instruments\SiD-3 Pianarhode.cmb
88 Combinator\001 Kawai K1 Single Instruments\SID-3 Techno Bass.cmb
89 Combinator\001 Kawai K1 Single Instruments\SID-4 Analog Horn.cmb
90 Combinator\001 Kawai K1 Single Instruments\SiD-4 Marktree.cmb
91 Combinator\001 Kawai K1 Single Instruments\SID-5 Orchestra4.cmb
92 Combinator\001 Kawai K1 Single Instruments\SiD-5 Squeez Sqar.cmb
93 Combinator\001 Kawai K1 Single Instruments\SiD-6 Native Bali.cmb
94 Combinator\001 Kawai K1 Single Instruments\SID-6 Orch Hit 5.cmb
95 Combinator\001 Kawai K1 Single Instruments\SID-7 String 16 Cb.cmb
96 Combinator\001 Kawai K1 Single Instruments\SiD-7 Tribal Drum.cmb
97 Combinator\001 Kawai K1 Single Instruments\SID-8 Kalimba Man.cmb
98 Combinator\001 Kawai K1 Single Instruments\SiD-8 Rim and Snare.cmb
99 Combinator\002 Kawai K1 Multi Instruments\MIA-1 Jakaah Pan.cmb
100 Combinator\002 Kawai K1 Multi Instruments\MIA-2 Bass-Rhode.cmb
101 Combinator\002 Kawai K1 Multi Instruments\MIA-3 Bass-EpSt.cmb
102 Combinator\002 Kawai K1 Multi Instruments\MIA-4 Space Riff.cmb
103 Combinator\002 Kawai K1 Multi Instruments\MIA-5 Techno-Spl.cmb
104 Combinator\002 Kawai K1 Multi Instruments\MIA-6 Halcion.cmb
105 Combinator\002 Kawai K1 Multi Instruments\MIA-7 BroqStryke.cmb
106 Combinator\002 Kawai K1 Multi Instruments\MIA-8 Bass-Guitr.cmb
107 Combinator\002 Kawai K1 Multi Instruments\MIB-1 Multi-Perc.cmb
108 Combinator\002 Kawai K1 Multi Instruments\MIB-2 Mirror Man.cmb
109 Combinator\002 Kawai K1 Multi Instruments\MIB-3 Cussion.cmb
110 Combinator\002 Kawai K1 Multi Instruments\MIB-4 Rock-Split.cmb
111 Combinator\002 Kawai K1 Multi Instruments\MIB-5 1 Note Huge.cmb
112 Combinator\002 Kawai K1 Multi Instruments\MIB-6 Nightmares.cmb
113 Combinator\002 Kawai K1 Multi Instruments\MIB-7 Metarrimba.cmb
114 Combinator\002 Kawai K1 Multi Instruments\MIB-8 Cussion 2.cmb
115 Combinator\002 Kawai K1 Multi Instruments\MIC-1 Sunny Days.cmb
116 Combinator\002 Kawai K1 Multi Instruments\MIC-2 Pan Bells.cmb
117 Combinator\002 Kawai K1 Multi Instruments\MIC-3 Jokali Pan.cmb
118 Combinator\002 Kawai K1 Multi Instruments\MIC-4 Orch Layer.cmb
119 Combinator\002 Kawai K1 Multi Instruments\MIC-5 Chorus Str.cmb
120 Combinator\002 Kawai K1 Multi Instruments\MIC-6 Oct String.cmb
121 Combinator\002 Kawai K1 Multi Instruments\MIC-7 Super Hit.cmb
122 Combinator\002 Kawai K1 Multi Instruments\MIC-8 Klank.cmb
123 Combinator\002 Kawai K1 Multi Instruments\MID-1 Cathedral.cmb
124 Combinator\002 Kawai K1 Multi Instruments\MID-2 Caliochiff.cmb
125 Combinator\002 Kawai K1 Multi Instruments\MID-3 Synth Horn.cmb
126 Combinator\002 Kawai K1 Multi Instruments\MID-4 Deep Space.cmb
127 Combinator\002 Kawai K1 Multi Instruments\MID-5 Mesothylum.cmb
128 Combinator\002 Kawai K1 Multi Instruments\MID-6 Vox Hit.cmb
129 Combinator\002 Kawai K1 Multi Instruments\MID-7 Big Bow 2v.cmb
130 Combinator\002 Kawai K1 Multi Instruments\MID-8 Midi Multi.cmb
131 Combinator\003 Reason 12 or higher\DR - Big Fat Kick Drum RUN.cmb
132 Combinator\003 Reason 12 or higher\FX - Low Noise - LQ.cmb
133 Combinator\003 Reason 12 or higher\PD - Bright Alley - LQ.cmb
134 Drums\DR - Crash.repatch
135 Drums\DR - Hihat.repatch

136 Drums\DR - Kick Rock.repatch
137 Drums\DR - Kick Sub.repatch
138 Drums\DR - Ride.repatch
139 Drums\DR - Rimshot.repatch
140 Drums\DR - Snare Light.repatch
141 Drums\DR - Snare Poppy.repatch
142 Drums\DR - Snare Tight.repatch
143 Drums\DR - Snare White.repatch
144 Drums\DR - Snoire.repatch
145 Drums\DR - Tom.repatch
146 Drums\DR - Vibe.repatch
147 Effects\FX - Falling.repatch
148 Effects\FX - Hoover Race.repatch
149 Effects\FX - Nilfisk.repatch
150 Effects\FX - Pan Bend.repatch
151 Effects\FX - Radio.repatch
152 Effects\FX - Random Noise - LQ.repatch
153 Effects\FX - Ritz Rats.repatch
154 Effects\FX - Rumblin.repatch
155 Effects\FX - Speak.repatch
156 Effects\FX - Station To Station.repatch
157 Effects\FX - The Rise and Fall of AM.repatch
158 Experimental\EX - All LFO Lead.repatch
159 Experimental\EX - All Random Lead.repatch
160 Experimental\EX - First Glide then Bend.repatch
161 Experimental\EX - Woosh.repatch
162 Keys\KY - AM House.repatch
163 Keys\KY - Bells.repatch
164 Keys\KY - Caribean.repatch
165 Keys\KY - Eastern Market.repatch
166 Keys\KY - Edgy Keys.repatch
167 Keys\KY - Jazz Organ.repatch
168 Keys\KY - Light Keys.repatch
169 Keys\KY - Light Piano.repatch
170 Keys\KY - Organ Keys.repatch
171 Keys\KY - Organ Small.repatch
172 Keys\KY - Pluck Pan.repatch
173 Keys\KY - Saw.repatch
174 Keys\KY - Trermolo.repatch
175 Keys\KY - Tube Bell.repatch
176 Keys\KY - Underworld Bell.repatch
177 Lead\LD - Ahh Voice.repatch
178 Lead\LD - Buzz.repatch
179 Lead\LD - Gritty.repatch
180 Lead\LD - In the Western.repatch
181 Lead\LD - Nitty.repatch
182 Lead\LD - Organ Kaput.repatch
183 Lead\LD - Strings.repatch
184 Lead\LD - Ting.repatch
185 Lead\PL - Heavy Guitar Picker - LQ.repatch
186 Pad\PD - Blue - LQ.repatch
187 Pad\PD - Muweh.repatch
188 Pad\PD - Square Pad.repatch
189 Pad\PD - String Pad.repatch

190 Pad\PD - Warm Synth.repatch
191 Pad\PD - Wave.repatch
192 Pad\PD - Wind.repatch
193 Wave Oscillators\001 Basic Waves
194 Wave Oscillators\002 Low
195 Wave Oscillators\003 Mid
196 Wave Oscillators\004 High - Mid
197 Wave Oscillators\005 High
198 Wave Oscillators\006 PCM
199 Wave Oscillators\007 All Waves
200 Wave Oscillators\001 Basic Waves\001 Sine.repatch
201 Wave Oscillators\001 Basic Waves\002 Square.repatch
202 Wave Oscillators\001 Basic Waves\003 Saw.repatch
203 Wave Oscillators\001 Basic Waves\004 White Noise.repatch
204 Wave Oscillators\001 Basic Waves\005 Pink Noise.repatch
205 Wave Oscillators\001 Basic Waves\006 Brown Noise.repatch
206 Wave Oscillators\001 Basic Waves\007 None - Silence.repatch
207 Wave Oscillators\001 Basic Waves\008 Static.repatch
208 Wave Oscillators\001 Basic Waves\225 Inverse Saw C.repatch
209 Wave Oscillators\001 Basic Waves\226 Triangle C.repatch
210 Wave Oscillators\001 Basic Waves\227 Random C.repatch
211 Wave Oscillators\002 Low\009 French Horn.repatch
212 Wave Oscillators\002 Low\010 String.repatch
213 Wave Oscillators\002 Low\011 String.repatch
214 Wave Oscillators\002 Low\012 String Pad.repatch
215 Wave Oscillators\002 Low\013 Piano 1.repatch
216 Wave Oscillators\002 Low\014 El Grand.repatch
217 Wave Oscillators\002 Low\015 E Piano 1.repatch
218 Wave Oscillators\002 Low\016 E Piano 2.repatch
219 Wave Oscillators\002 Low\017 E Piano 3.repatch
220 Wave Oscillators\002 Low\018 Clavi.repatch
221 Wave Oscillators\002 Low\019 Vibe.repatch
222 Wave Oscillators\002 Low\020 A Guitar.repatch
223 Wave Oscillators\002 Low\021 F Guitar 1.repatch
224 Wave Oscillators\002 Low\022 F Guitar 2.repatch
225 Wave Oscillators\002 Low\023 Ac Bass 1.repatch
226 Wave Oscillators\002 Low\024 Ac Bass 2.repatch
227 Wave Oscillators\002 Low\025 Digi Bass 1.repatch
228 Wave Oscillators\002 Low\026 Pick Bass.repatch
229 Wave Oscillators\002 Low\027 Digi Bass 2.repatch
230 Wave Oscillators\002 Low\028 Round Bass.repatch
231 Wave Oscillators\002 Low\029 Fretless 1.repatch
232 Wave Oscillators\002 Low\030 Fretless 2.repatch
233 Wave Oscillators\002 Low\031 Flute.repatch
234 Wave Oscillators\002 Low\032 Panflute.repatch
235 Wave Oscillators\002 Low\033 Harmonica.repatch
236 Wave Oscillators\002 Low\034 Glocken.repatch
237 Wave Oscillators\002 Low\035 Tine.repatch
238 Wave Oscillators\002 Low\036 Harp.repatch
239 Wave Oscillators\002 Low\037 Marimba.repatch
240 Wave Oscillators\002 Low\038 E Tom.repatch
241 Wave Oscillators\002 Low\039 Log Drum.repatch
242 Wave Oscillators\002 Low\040 Jazz Organ 1.repatch
243 Wave Oscillators\002 Low\041 Mello Pad.repatch

244 Wave Oscillators\002 Low\042 Synth Solo.repatch
245 Wave Oscillators\002 Low\043 Synth 2.repatch
246 Wave Oscillators\003 Mid\044 French Horn 1.repatch
247 Wave Oscillators\003 Mid\045 French Horn 2.repatch
248 Wave Oscillators\003 Mid\046 Brass 1.repatch
249 Wave Oscillators\003 Mid\047 Brass 2.repatch
250 Wave Oscillators\003 Mid\048 Brass 3.repatch
251 Wave Oscillators\003 Mid\049 Brass 4.repatch
252 Wave Oscillators\003 Mid\050 Trumpet 1.repatch
253 Wave Oscillators\003 Mid\051 Trumpet 2.repatch
254 Wave Oscillators\003 Mid\052 Violin.repatch
255 Wave Oscillators\003 Mid\053 String.repatch
256 Wave Oscillators\003 Mid\054 Piano 1.repatch
257 Wave Oscillators\003 Mid\055 Piano 2.repatch
258 Wave Oscillators\003 Mid\056 Piano 3.repatch
259 Wave Oscillators\003 Mid\057 Piano 2 - 1.repatch
260 Wave Oscillators\003 Mid\058 Piano 3 - 1.repatch
261 Wave Oscillators\003 Mid\059 Piano 4 - 1.repatch
262 Wave Oscillators\003 Mid\060 Piano 4 - 2.repatch
263 Wave Oscillators\003 Mid\061 El Grand.repatch
264 Wave Oscillators\003 Mid\062 E Piano 1.repatch
265 Wave Oscillators\003 Mid\063 E Piano 2.repatch
266 Wave Oscillators\003 Mid\064 E Piano 2 - 1.repatch
267 Wave Oscillators\003 Mid\065 Clavi.repatch
268 Wave Oscillators\003 Mid\066 Harpsichord.repatch
269 Wave Oscillators\003 Mid\067 Vibe.repatch
270 Wave Oscillators\003 Mid\068 A Guitar.repatch
271 Wave Oscillators\003 Mid\069 F Guitar.repatch
272 Wave Oscillators\003 Mid\070 Strat 1.repatch
273 Wave Oscillators\003 Mid\071 Strat 2.repatch
274 Wave Oscillators\003 Mid\072 Ac Bass.repatch
275 Wave Oscillators\003 Mid\073 Pull Bass 1.repatch
276 Wave Oscillators\003 Mid\074 Pull Bass 2.repatch
277 Wave Oscillators\003 Mid\075 Round Bass.repatch
278 Wave Oscillators\003 Mid\076 Slap Bass 1.repatch
279 Wave Oscillators\003 Mid\077 Slap Bass 2.repatch
280 Wave Oscillators\003 Mid\078 Slap Bass 3.repatch
281 Wave Oscillators\003 Mid\079 Fretless 1.repatch
282 Wave Oscillators\003 Mid\080 Fretless 2.repatch
283 Wave Oscillators\003 Mid\081 Synth Bass 1.repatch
284 Wave Oscillators\003 Mid\082 Synth Bass 2.repatch
285 Wave Oscillators\003 Mid\083 Harmonica.repatch
286 Wave Oscillators\003 Mid\084 Clarinet 1.repatch
287 Wave Oscillators\003 Mid\085 Clarinet 2.repatch
288 Wave Oscillators\003 Mid\086 Oboe 1.repatch
289 Wave Oscillators\003 Mid\087 Oboe 2.repatch
290 Wave Oscillators\003 Mid\088 Shakuhachi.repatch
291 Wave Oscillators\003 Mid\089 Oriental Bell 1.repatch
292 Wave Oscillators\003 Mid\090 Oriental Bell 2.repatch
293 Wave Oscillators\003 Mid\091 Bell.repatch
294 Wave Oscillators\003 Mid\092 Koto.repatch
295 Wave Oscillators\003 Mid\093 Sitar.repatch
296 Wave Oscillators\003 Mid\094 E Tom.repatch
297 Wave Oscillators\003 Mid\095 Log Drum 1.repatch

298 Wave Oscillators\003 Mid\096 Log Drum 2.repatch
299 Wave Oscillators\003 Mid\097 Steel Drum 1.repatch
300 Wave Oscillators\003 Mid\098 Steel Drum 2.repatch
301 Wave Oscillators\003 Mid\099 Voice 1.repatch
302 Wave Oscillators\003 Mid\100 Voice 2.repatch
303 Wave Oscillators\003 Mid\101 Accordion 1.repatch
304 Wave Oscillators\003 Mid\102 Accordion 2.repatch
305 Wave Oscillators\003 Mid\103 Jazz Organ 2.repatch
306 Wave Oscillators\003 Mid\104 Rock Organ 1.repatch
307 Wave Oscillators\003 Mid\105 Draw Bar 1.repatch
308 Wave Oscillators\003 Mid\106 Draw Bar 2.repatch
309 Wave Oscillators\003 Mid\107 Pipe Organ 1.repatch
310 Wave Oscillators\003 Mid\108 Pipe Organ 2.repatch
311 Wave Oscillators\003 Mid\109 Rock Organ 2.repatch
312 Wave Oscillators\003 Mid\110 Synth Solo 1.repatch
313 Wave Oscillators\003 Mid\111 Synth Solo 2.repatch
314 Wave Oscillators\003 Mid\112 Synth 2 - 1.repatch
315 Wave Oscillators\003 Mid\113 Synth 2 - 2.repatch
316 Wave Oscillators\003 Mid\114 Synth 3.repatch
317 Wave Oscillators\004 High - Mid\115 Brass 1.repatch
318 Wave Oscillators\004 High - Mid\116 Brass 2.repatch
319 Wave Oscillators\004 High - Mid\117 Orchestra.repatch
320 Wave Oscillators\004 High - Mid\118 Piano 1.repatch
321 Wave Oscillators\004 High - Mid\119 Piano 4.repatch
322 Wave Oscillators\004 High - Mid\120 E Piano 1 - 1 E + 12 Cents.repatch
323 Wave Oscillators\004 High - Mid\121 E Piano 1 - 2 Ais.repatch
324 Wave Oscillators\004 High - Mid\122 E Piano 2.repatch
325 Wave Oscillators\004 High - Mid\123 E Piano 3.repatch
326 Wave Oscillators\004 High - Mid\124 Clavi.repatch
327 Wave Oscillators\004 High - Mid\125 Harpsichord 1.repatch
328 Wave Oscillators\004 High - Mid\126 Harpsichord 2.repatch
329 Wave Oscillators\004 High - Mid\127 Vibe Dis + 2 Cents.repatch
330 Wave Oscillators\004 High - Mid\128 Digi Bass 1.repatch
331 Wave Oscillators\004 High - Mid\129 Digi Bass 2 - 1.repatch
332 Wave Oscillators\004 High - Mid\130 Digi Bass 2 - 2.repatch
333 Wave Oscillators\004 High - Mid\131 Pick Bass.repatch
334 Wave Oscillators\004 High - Mid\132 Glocken 1 E + 15 Cents.repatch
335 Wave Oscillators\004 High - Mid\133 Glocken 2 G.repatch
336 Wave Oscillators\004 High - Mid\134 Tine 1 Ais + 25 Cents.repatch
337 Wave Oscillators\004 High - Mid\135 Tine 2 Fis + 35 Cents.repatch
338 Wave Oscillators\004 High - Mid\136 Tine 3.repatch
339 Wave Oscillators\004 High - Mid\137 Tube Bell 1.repatch
340 Wave Oscillators\004 High - Mid\138 Tube Bell 2.repatch
341 Wave Oscillators\004 High - Mid\139 Tube Bell 3 C + 28 Cents.repatch
342 Wave Oscillators\004 High - Mid\140 Xylophone 1 E + 8 Cents.repatch
343 Wave Oscillators\004 High - Mid\141 Xylophone 2 G.repatch
344 Wave Oscillators\004 High - Mid\142 Harp E.repatch
345 Wave Oscillators\004 High - Mid\143 Koto.repatch
346 Wave Oscillators\004 High - Mid\144 Sitar 1.repatch
347 Wave Oscillators\004 High - Mid\145 Sitar 2.repatch
348 Wave Oscillators\004 High - Mid\146 Kalimba 1 Ais + 33 Cents.repatch
349 Wave Oscillators\004 High - Mid\147 Kalimba 2.repatch
350 Wave Oscillators\004 High - Mid\148 Kalimba 3 B - 50 Cents.repatch
351 Wave Oscillators\004 High - Mid\149 Log Drum.repatch

352 Wave Oscillators\004 High - Mid\150 Steel Drum Ais + 13 Cents.repatch
353 Wave Oscillators\004 High - Mid\151 Pipe Organ 3 - 1.repatch
354 Wave Oscillators\004 High - Mid\152 Pipe Organ 3 - 2.repatch
355 Wave Oscillators\004 High - Mid\153 Synth 1 Cis - 46 Cents.repatch
356 Wave Oscillators\004 High - Mid\154 Synth 2 Dis - 26 Cents.repatch
357 Wave Oscillators\004 High - Mid\155 Synth 3 - 1 Cis + 40 Cents.repatch
358 Wave Oscillators\004 High - Mid\156 Synth 3 - 2.repatch
359 Wave Oscillators\004 High - Mid\157 Synth 4 - 1.repatch
360 Wave Oscillators\004 High - Mid\158 Synth 4 - 2.repatch
361 Wave Oscillators\005 High\159 Clavi.repatch
362 Wave Oscillators\005 High\160 Digi Bass 1 - 1.repatch
363 Wave Oscillators\005 High\161 Digi Bass 1 - 2.repatch
364 Wave Oscillators\005 High\162 Pick bass 1.repatch
365 Wave Oscillators\005 High\163 Pick bass 2.repatch
366 Wave Oscillators\005 High\164 Round Bass 1.repatch
367 Wave Oscillators\005 High\165 Round Bass 2 Gis - 16 Cents.repatch
368 Wave Oscillators\005 High\166 Harmonica 1.repatch
369 Wave Oscillators\005 High\167 Harmonica 2 Cis - 20 Cents.repatch
370 Wave Oscillators\005 High\168 Harp.repatch
371 Wave Oscillators\005 High\169 Koto.repatch
372 Wave Oscillators\005 High\170 Sitar.repatch
373 Wave Oscillators\005 High\171 Marimba C + 45 Cents.repatch
374 Wave Oscillators\005 High\172 Synth 1.repatch
375 Wave Oscillators\006 PCM\173 Bass Drum.repatch
376 Wave Oscillators\006 PCM\174 Ac Snare.repatch
377 Wave Oscillators\006 PCM\175 Tight Snare.repatch
378 Wave Oscillators\006 PCM\176 E Snare.repatch
379 Wave Oscillators\006 PCM\177 Rim.repatch
380 Wave Oscillators\006 PCM\178 Ac Tom.repatch
381 Wave Oscillators\006 PCM\179 H Hat.repatch
382 Wave Oscillators\006 PCM\180 Crash.repatch
383 Wave Oscillators\006 PCM\181 Ride.repatch
384 Wave Oscillators\006 PCM\182 Strat Guitar C - 30 Cents.repatch
385 Wave Oscillators\006 PCM\183 Fuzz Mute.repatch
386 Wave Oscillators\006 PCM\184 A Guitar.repatch
387 Wave Oscillators\006 PCM\185 F Guitar.repatch
388 Wave Oscillators\006 PCM\186 Guitar Harmo.repatch
389 Wave Oscillators\006 PCM\187 Pull Bass.repatch
390 Wave Oscillators\006 PCM\188 Bass Harmo.repatch
391 Wave Oscillators\006 PCM\189 Bowed String.repatch
392 Wave Oscillators\006 PCM\190 String Attack.repatch
393 Wave Oscillators\006 PCM\191 String Sus.repatch
394 Wave Oscillators\006 PCM\192 Pizzicato.repatch
395 Wave Oscillators\006 PCM\193 Piano.repatch
396 Wave Oscillators\006 PCM\194 El Grand.repatch
397 Wave Oscillators\006 PCM\195 Piano Noise.repatch
398 Wave Oscillators\006 PCM\196 Trumpet.repatch
399 Wave Oscillators\006 PCM\197 Shakuhachi Attack.repatch
400 Wave Oscillators\006 PCM\198 Shakuhachi Sus.repatch
401 Wave Oscillators\006 PCM\199 Pan Flute Attack.repatch
402 Wave Oscillators\006 PCM\200 Pan Flute Sus.repatch
403 Wave Oscillators\006 PCM\201 Voice.repatch
404 Wave Oscillators\006 PCM\202 White Noise.repatch
405 Wave Oscillators\006 PCM\203 String Loop C - 15 Cents.repatch

406 Wave Oscillators\006 PCM\204 Shakuhachi Loop C - 18 Cents.repatch
407 Wave Oscillators\006 PCM\205 Pan Flute Loop.repatch
408 Wave Oscillators\006 PCM\206 Voice Loop.repatch
409 Wave Oscillators\006 PCM\207 White Noise Loop.repatch
410 Wave Oscillators\006 PCM\208 Ac Snare Loop.repatch
411 Wave Oscillators\006 PCM\209 F Guitar Loop.repatch
412 Wave Oscillators\006 PCM\210 Pull Bass Loop.repatch
413 Wave Oscillators\006 PCM\211 Omnibus Loop 1.repatch
414 Wave Oscillators\006 PCM\212 Omnibus Loop 2.repatch
415 Wave Oscillators\006 PCM\213 Omnibus Loop 3.repatch
416 Wave Oscillators\006 PCM\214 Omnibus Loop 4.repatch
417 Wave Oscillators\006 PCM\215 Omnibus Loop 5.repatch
418 Wave Oscillators\006 PCM\216 Omnibus Loop 6.repatch
419 Wave Oscillators\006 PCM\217 Omnibus Loop 7.repatch
420 Wave Oscillators\006 PCM\218 Omnibus Loop 8.repatch
421 Wave Oscillators\006 PCM\219 Ac Snare Rev.repatch
422 Wave Oscillators\006 PCM\220 Ac Tom Rev.repatch
423 Wave Oscillators\006 PCM\221 F Guitar Rev.repatch
424 Wave Oscillators\006 PCM\222 H Hat Alt Loop.repatch
425 Wave Oscillators\006 PCM\223 Crash Alt Loop.repatch
426 Wave Oscillators\006 PCM\224 Piano Noise Alt Loop.repatch
427 Wave Oscillators\007 All Waves\001 Sine.repatch
428 Wave Oscillators\007 All Waves\002 Square.repatch
429 Wave Oscillators\007 All Waves\003 Saw.repatch
430 Wave Oscillators\007 All Waves\004 White Noise.repatch
431 Wave Oscillators\007 All Waves\005 Pink Noise.repatch
432 Wave Oscillators\007 All Waves\006 Brown Noise.repatch
433 Wave Oscillators\007 All Waves\007 None - Silence.repatch
434 Wave Oscillators\007 All Waves\008 Static.repatch
435 Wave Oscillators\007 All Waves\009 French Horn.repatch
436 Wave Oscillators\007 All Waves\010 String.repatch
437 Wave Oscillators\007 All Waves\011 String.repatch
438 Wave Oscillators\007 All Waves\012 String Pad.repatch
439 Wave Oscillators\007 All Waves\013 Piano 1.repatch
440 Wave Oscillators\007 All Waves\014 El Grand.repatch
441 Wave Oscillators\007 All Waves\015 E Piano 1.repatch
442 Wave Oscillators\007 All Waves\016 E Piano 2.repatch
443 Wave Oscillators\007 All Waves\017 E Piano 3.repatch
444 Wave Oscillators\007 All Waves\018 Clavi.repatch
445 Wave Oscillators\007 All Waves\019 Vibe.repatch
446 Wave Oscillators\007 All Waves\020 A Guitar.repatch
447 Wave Oscillators\007 All Waves\021 F Guitar 1.repatch
448 Wave Oscillators\007 All Waves\022 F Guitar 2.repatch
449 Wave Oscillators\007 All Waves\023 Ac Bass 1.repatch
450 Wave Oscillators\007 All Waves\024 Ac Bass 2.repatch
451 Wave Oscillators\007 All Waves\025 Digi Bass 1.repatch
452 Wave Oscillators\007 All Waves\026 Pick Bass.repatch
453 Wave Oscillators\007 All Waves\027 Digi Bass 2.repatch
454 Wave Oscillators\007 All Waves\028 Round Bass.repatch
455 Wave Oscillators\007 All Waves\029 Fretless 1.repatch
456 Wave Oscillators\007 All Waves\030 Fretless 2.repatch
457 Wave Oscillators\007 All Waves\031 Flute.repatch
458 Wave Oscillators\007 All Waves\032 Panflute.repatch
459 Wave Oscillators\007 All Waves\033 Harmonica.repatch

460 Wave Oscillators\007 All Waves\034 Glocken.repatch
461 Wave Oscillators\007 All Waves\035 Tine.repatch
462 Wave Oscillators\007 All Waves\036 Harp.repatch
463 Wave Oscillators\007 All Waves\037 Marimba.repatch
464 Wave Oscillators\007 All Waves\038 E Tom.repatch
465 Wave Oscillators\007 All Waves\039 Log Drum.repatch
466 Wave Oscillators\007 All Waves\040 Jazz Organ 1.repatch
467 Wave Oscillators\007 All Waves\041 Mello Pad.repatch
468 Wave Oscillators\007 All Waves\042 Synth Solo.repatch
469 Wave Oscillators\007 All Waves\043 Synth 2.repatch
470 Wave Oscillators\007 All Waves\044 French Horn 1.repatch
471 Wave Oscillators\007 All Waves\045 French Horn 2.repatch
472 Wave Oscillators\007 All Waves\046 Brass 1.repatch
473 Wave Oscillators\007 All Waves\047 Brass 2.repatch
474 Wave Oscillators\007 All Waves\048 Brass 3.repatch
475 Wave Oscillators\007 All Waves\049 Brass 4.repatch
476 Wave Oscillators\007 All Waves\050 Trumpet 1.repatch
477 Wave Oscillators\007 All Waves\051 Trumpet 2.repatch
478 Wave Oscillators\007 All Waves\052 Violin.repatch
479 Wave Oscillators\007 All Waves\053 String.repatch
480 Wave Oscillators\007 All Waves\054 Piano 1.repatch
481 Wave Oscillators\007 All Waves\055 Piano 2.repatch
482 Wave Oscillators\007 All Waves\056 Piano 3.repatch
483 Wave Oscillators\007 All Waves\057 Piano 2 - 1.repatch
484 Wave Oscillators\007 All Waves\058 Piano 3 - 1.repatch
485 Wave Oscillators\007 All Waves\059 Piano 4 - 1.repatch
486 Wave Oscillators\007 All Waves\060 Piano 4 - 2.repatch
487 Wave Oscillators\007 All Waves\061 El Grand.repatch
488 Wave Oscillators\007 All Waves\062 E Piano 1.repatch
489 Wave Oscillators\007 All Waves\063 E Piano 2.repatch
490 Wave Oscillators\007 All Waves\064 E Piano 2 - 1.repatch
491 Wave Oscillators\007 All Waves\065 Clavi.repatch
492 Wave Oscillators\007 All Waves\066 Harpsichord.repatch
493 Wave Oscillators\007 All Waves\067 Vibe.repatch
494 Wave Oscillators\007 All Waves\068 A Guitar.repatch
495 Wave Oscillators\007 All Waves\069 F Guitar.repatch
496 Wave Oscillators\007 All Waves\070 Strat 1.repatch
497 Wave Oscillators\007 All Waves\071 Strat 2.repatch
498 Wave Oscillators\007 All Waves\072 Ac Bass.repatch
499 Wave Oscillators\007 All Waves\073 Pull Bass 1.repatch
500 Wave Oscillators\007 All Waves\074 Pull Bass 2.repatch
501 Wave Oscillators\007 All Waves\075 Round Bass.repatch
502 Wave Oscillators\007 All Waves\076 Slap Bass 1.repatch
503 Wave Oscillators\007 All Waves\077 Slap Bass 2.repatch
504 Wave Oscillators\007 All Waves\078 Slap Bass 3.repatch
505 Wave Oscillators\007 All Waves\079 Fretless 1.repatch
506 Wave Oscillators\007 All Waves\080 Fretless 2.repatch
507 Wave Oscillators\007 All Waves\081 Synth Bass 1.repatch
508 Wave Oscillators\007 All Waves\082 Synth Bass 2.repatch
509 Wave Oscillators\007 All Waves\083 Harmonica.repatch
510 Wave Oscillators\007 All Waves\084 Clarinet 1.repatch
511 Wave Oscillators\007 All Waves\085 Clarinet 2.repatch
512 Wave Oscillators\007 All Waves\086 Oboe 1.repatch
513 Wave Oscillators\007 All Waves\087 Oboe 2.repatch

514 Wave Oscillators\007 All Waves\088 Shakuhachi.repatch
515 Wave Oscillators\007 All Waves\089 Oriental Bell 1.repatch
516 Wave Oscillators\007 All Waves\090 Oriental Bell 2.repatch
517 Wave Oscillators\007 All Waves\091 Bell.repatch
518 Wave Oscillators\007 All Waves\092 Koto.repatch
519 Wave Oscillators\007 All Waves\093 Sitar.repatch
520 Wave Oscillators\007 All Waves\094 E Tom.repatch
521 Wave Oscillators\007 All Waves\095 Log Drum 1.repatch
522 Wave Oscillators\007 All Waves\096 Log Drum 2.repatch
523 Wave Oscillators\007 All Waves\097 Steel Drum 1.repatch
524 Wave Oscillators\007 All Waves\098 Steel Drum 2.repatch
525 Wave Oscillators\007 All Waves\099 Voice 1.repatch
526 Wave Oscillators\007 All Waves\100 Voice 2.repatch
527 Wave Oscillators\007 All Waves\101 Accordion 1.repatch
528 Wave Oscillators\007 All Waves\102 Accordion 2.repatch
529 Wave Oscillators\007 All Waves\103 Jazz Organ 2.repatch
530 Wave Oscillators\007 All Waves\104 Rock Organ 1.repatch
531 Wave Oscillators\007 All Waves\105 Draw Bar 1.repatch
532 Wave Oscillators\007 All Waves\106 Draw Bar 2.repatch
533 Wave Oscillators\007 All Waves\107 Pipe Organ 1.repatch
534 Wave Oscillators\007 All Waves\108 Pipe Organ 2.repatch
535 Wave Oscillators\007 All Waves\109 Rock Organ 2.repatch
536 Wave Oscillators\007 All Waves\110 Synth Solo 1.repatch
537 Wave Oscillators\007 All Waves\111 Synth Solo 2.repatch
538 Wave Oscillators\007 All Waves\112 Synth 2 - 1.repatch
539 Wave Oscillators\007 All Waves\113 Synth 2 - 2.repatch
540 Wave Oscillators\007 All Waves\114 Synth 3.repatch
541 Wave Oscillators\007 All Waves\115 Brass 1.repatch
542 Wave Oscillators\007 All Waves\116 Brass 2.repatch
543 Wave Oscillators\007 All Waves\117 Orchestra.repatch
544 Wave Oscillators\007 All Waves\118 Piano 1.repatch
545 Wave Oscillators\007 All Waves\119 Piano 4.repatch
546 Wave Oscillators\007 All Waves\120 E Piano 1 - 1 E + 12 Cents.repatch
547 Wave Oscillators\007 All Waves\121 E Piano 1 - 2 Ais.repatch
548 Wave Oscillators\007 All Waves\122 E Piano 2.repatch
549 Wave Oscillators\007 All Waves\123 E Piano 3.repatch
550 Wave Oscillators\007 All Waves\124 Clavi.repatch
551 Wave Oscillators\007 All Waves\125 Harpsichord 1.repatch
552 Wave Oscillators\007 All Waves\126 Harpsichord 2.repatch
553 Wave Oscillators\007 All Waves\127 Vibe Dis + 2 Cents.repatch
554 Wave Oscillators\007 All Waves\128 Digi Bass 1.repatch
555 Wave Oscillators\007 All Waves\129 Digi Bass 2 - 1.repatch
556 Wave Oscillators\007 All Waves\130 Digi Bass 2 - 2.repatch
557 Wave Oscillators\007 All Waves\131 Pick Bass.repatch
558 Wave Oscillators\007 All Waves\132 Glocken 1 E + 15 Cents.repatch
559 Wave Oscillators\007 All Waves\133 Glocken 2 G.repatch
560 Wave Oscillators\007 All Waves\134 Tine 1 Ais + 25 Cents.repatch
561 Wave Oscillators\007 All Waves\135 Tine 2 Fis + 35 Cents.repatch
562 Wave Oscillators\007 All Waves\136 Tine 3.repatch
563 Wave Oscillators\007 All Waves\137 Tube Bell 1.repatch
564 Wave Oscillators\007 All Waves\138 Tube Bell 2.repatch
565 Wave Oscillators\007 All Waves\139 Tube Bell 3 C + 28 Cents.repatch
566 Wave Oscillators\007 All Waves\140 Xylophone 1 E + 8 Cents.repatch
567 Wave Oscillators\007 All Waves\141 Xylophone 2 G.repatch

568 Wave Oscillators\007 All Waves\142 Harp E.repatch
569 Wave Oscillators\007 All Waves\143 Koto.repatch
570 Wave Oscillators\007 All Waves\144 Sitar 1.repatch
571 Wave Oscillators\007 All Waves\145 Sitar 2.repatch
572 Wave Oscillators\007 All Waves\146 Kalimba 1 Ais + 33 Cents.repatch
573 Wave Oscillators\007 All Waves\147 Kalimba 2.repatch
574 Wave Oscillators\007 All Waves\148 Kalimba 3 B - 50 Cents.repatch
575 Wave Oscillators\007 All Waves\149 Log Drum.repatch
576 Wave Oscillators\007 All Waves\150 Steel Drum Ais + 13 Cents.repatch
577 Wave Oscillators\007 All Waves\151 Pipe Organ 3 - 1.repatch
578 Wave Oscillators\007 All Waves\152 Pipe Organ 3 - 2.repatch
579 Wave Oscillators\007 All Waves\153 Synth 1 Cis - 46 Cents.repatch
580 Wave Oscillators\007 All Waves\154 Synth 2 Dis - 26 Cents.repatch
581 Wave Oscillators\007 All Waves\155 Synth 3 - 1 Cis + 40 Cents.repatch
582 Wave Oscillators\007 All Waves\156 Synth 3 - 2.repatch
583 Wave Oscillators\007 All Waves\157 Synth 4 - 1.repatch
584 Wave Oscillators\007 All Waves\158 Synth 4 - 2.repatch
585 Wave Oscillators\007 All Waves\159 Clavi.repatch
586 Wave Oscillators\007 All Waves\160 Digi Bass 1 - 1.repatch
587 Wave Oscillators\007 All Waves\161 Digi Bass 1 - 2.repatch
588 Wave Oscillators\007 All Waves\162 Pick bass 1.repatch
589 Wave Oscillators\007 All Waves\163 Pick bass 2.repatch
590 Wave Oscillators\007 All Waves\164 Round Bass 1.repatch
591 Wave Oscillators\007 All Waves\165 Round Bass 2 Gis - 16 Cents.repatch
592 Wave Oscillators\007 All Waves\166 Harmonica 1.repatch
593 Wave Oscillators\007 All Waves\167 Harmonica 2 Cis - 20 Cents.repatch
594 Wave Oscillators\007 All Waves\168 Harp.repatch
595 Wave Oscillators\007 All Waves\169 Koto.repatch
596 Wave Oscillators\007 All Waves\170 Sitar.repatch
597 Wave Oscillators\007 All Waves\171 Marimba C + 45 Cents.repatch
598 Wave Oscillators\007 All Waves\172 Synth 1.repatch
599 Wave Oscillators\007 All Waves\173 Bass Drum.repatch
600 Wave Oscillators\007 All Waves\174 Ac Snare.repatch
601 Wave Oscillators\007 All Waves\175 Tight Snare.repatch
602 Wave Oscillators\007 All Waves\176 E Snare.repatch
603 Wave Oscillators\007 All Waves\177 Rim.repatch
604 Wave Oscillators\007 All Waves\178 Ac Tom.repatch
605 Wave Oscillators\007 All Waves\179 H Hat.repatch
606 Wave Oscillators\007 All Waves\180 Crash.repatch
607 Wave Oscillators\007 All Waves\181 Ride.repatch
608 Wave Oscillators\007 All Waves\182 Strat Guitar C - 30 Cents.repatch
609 Wave Oscillators\007 All Waves\183 Fuzz Mute.repatch
610 Wave Oscillators\007 All Waves\184 A Guitar.repatch
611 Wave Oscillators\007 All Waves\185 F Guitar.repatch
612 Wave Oscillators\007 All Waves\186 Guitar Harmo.repatch
613 Wave Oscillators\007 All Waves\187 Pull Bass.repatch
614 Wave Oscillators\007 All Waves\188 Bass Harmo.repatch
615 Wave Oscillators\007 All Waves\189 Bowed String.repatch
616 Wave Oscillators\007 All Waves\190 String Attack.repatch
617 Wave Oscillators\007 All Waves\191 String Sus.repatch
618 Wave Oscillators\007 All Waves\192 Pizzicato.repatch
619 Wave Oscillators\007 All Waves\193 Piano.repatch
620 Wave Oscillators\007 All Waves\194 El Grand.repatch
621 Wave Oscillators\007 All Waves\195 Piano Noise.repatch

622 Wave Oscillators\007 All Waves\196 Trumpet.repatch
623 Wave Oscillators\007 All Waves\197 Shakuhachi Attack.repatch
624 Wave Oscillators\007 All Waves\198 Shakuhachi Sus.repatch
625 Wave Oscillators\007 All Waves\199 Pan Flute Attack.repatch
626 Wave Oscillators\007 All Waves\200 Pan Flute Sus.repatch
627 Wave Oscillators\007 All Waves\201 Voice.repatch
628 Wave Oscillators\007 All Waves\202 White Noise.repatch
629 Wave Oscillators\007 All Waves\203 String Loop C - 15 Cents.repatch
630 Wave Oscillators\007 All Waves\204 Shakuhachi Loop C - 18 Cents.repatch
631 Wave Oscillators\007 All Waves\205 Pan Flute Loop.repatch
632 Wave Oscillators\007 All Waves\206 Voice Loop.repatch
633 Wave Oscillators\007 All Waves\207 White Noise Loop.repatch
634 Wave Oscillators\007 All Waves\208 Ac Snare Loop.repatch
635 Wave Oscillators\007 All Waves\209 F Guitar Loop.repatch
636 Wave Oscillators\007 All Waves\210 Pull Bass Loop.repatch
637 Wave Oscillators\007 All Waves\211 Omnibus Loop 1.repatch
638 Wave Oscillators\007 All Waves\212 Omnibus Loop 2.repatch
639 Wave Oscillators\007 All Waves\213 Omnibus Loop 3.repatch
640 Wave Oscillators\007 All Waves\214 Omnibus Loop 4.repatch
641 Wave Oscillators\007 All Waves\215 Omnibus Loop 5.repatch
642 Wave Oscillators\007 All Waves\216 Omnibus Loop 6.repatch
643 Wave Oscillators\007 All Waves\217 Omnibus Loop 7.repatch
644 Wave Oscillators\007 All Waves\218 Omnibus Loop 8.repatch
645 Wave Oscillators\007 All Waves\219 Ac Snare Rev.repatch
646 Wave Oscillators\007 All Waves\220 Ac Tom Rev.repatch
647 Wave Oscillators\007 All Waves\221 F Guitar Rev.repatch
648 Wave Oscillators\007 All Waves\222 H Hat Alt Loop.repatch
649 Wave Oscillators\007 All Waves\223 Crash Alt Loop.repatch
650 Wave Oscillators\007 All Waves\224 Piano Noise Alt Loop.repatch
651 Wave Oscillators\007 All Waves\225 Inverse Saw C.repatch
652 Wave Oscillators\007 All Waves\226 Triangle C.repatch
653 Wave Oscillators\007 All Waves\227 Random C.repatch
654 Wave Oscillators\007 All Waves\228 Snare White.repatch

9 Credits

- Kawai JP for permission, Kawai US for .sysex files and manual
- Reasontalk, beta test forum hosting
- Reasonstudios for their support
- Loque, signature patches
- Danny Kegel for the demo songs
- All the beta testers

10 Appendixes

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.

Envelope decay
A few Waveforms may produce a short click when the Envelope Attack and / or Envelope Decay are set to 0. The click will be gone when the Envelope Decay is set to 10 milliseconds or higher.

Waveforms
A waveform with a number higher then 172 and that are marked with an * have their loop mode set to Off internally. These are one shot waveforms.

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 waveforms and a lot of noise is added by the electric circuit when sampled from the Kawai's K1 Output . You can correct the noise and hiss by using the Low Pass 12 Filter.

CPU load
To reduce CPU load, on the Output panel:

- Set Poly to Off

. To reduce CPU load, on the Convolution Reverb panel:

- Reduce the Qlty (Quality) value

11 MIDI Implementation Chart

In the table below, first the MIDI CC Number is mentioned and is followed by the name of the function in Rumbler Compact Synthesizer:

12 Saw Oscillator Level
13 Saw And Square Oscillator Amount
14 Saw And Square Oscillator Detune
15 Saw And Square Osc Lvl Mod Amount
16 Saw And Square Osc Lvl Mod Source
17 Square Oscillator Level
18 Saw And Square Oscillator Tune
19 Saw And Square Osc Tune Mod Amount
20 Saw And Square Osc Tune Mod Source
21 Wave Osc Level
22 Wave Osc Level Mod Amount
23 Wave Osc Level Mod Source
24 Wave Osc Select
25 Wave Osc Tune
26 Wave Osc Fine Tune
27 Wave Osc Tune Mod Amount
28 Wave Osc Tune Mod Source
29 Amp Envelope To Level On Off
30 Envelope Delay Time
31 Envelope Attack
33 Envelope Attack Curve
34 Envelope Attack Mod Amount
35 Envelope Attack Mod Source
36 Envelope Hold
37 Envelope Hold Mod Amount
39 Envelope Hold Mod Source
40 Envelope Decay
41 Envelope Decay Curve
42 Envelope Decay Mod Amount
43 Envelope Decay Mod Source
44 Envelope Sustain
45 Envelope Sustain Mod Amount
46 Envelope Sustain Mod Source
47 Envelope Release
48 Envelope Release Curve
49 Envelope Release Mod Amount
50 Envelope Release Mod Source
51 LFO_Shape
52 LFO Rate
53 LFO Retrigger On Off
54 LFO Rate Mod Amount
55 LFO Rate Mod Source
56 Ring Modulation Level
57 Ring Modulation Harmonic
58 Ring Modulation Disharmonic
59 Ring Modulation Mod Amount
60 Ring Modulation Mod Source
61 Shaper Mode

62 Shaper Drive Mod Amount
63 Shaper Drive Mod Source
65 EQ Gain
66 EQ Band Width
67 EQ Band Frequency
68 EQ Band Frequency Mod Amount
69 EQ Band Frequency Mod Source
70 Low Pass 12 Filter On Off
71 Low Pass 12 Cutoff
72 Low Pass 12 Cutoff Key Track
73 Low Pass 12 Cutoff Mod Amount
74 Low Pass 12 Cutoff Mod Source
75 Low Pass 12 Resonance
76 Low Pass 12 Resonance Key Track
77 Low Pass 12 Resonance Mod Amount
78 Low Pass 12 Resonance Mod Source
79 Chorus On Off
80 Chorus Rate
81 Chorus Depth
82 Chorus Delay
83 Chorus Voices Amount
84 Chorus Mix
85 Delay On Off
86 Delay Sync On Off
87 Delay Sync
88 Delay Time
89 Delay Feedback
90 Delay Ratio
91 Delay Damping
92 Delay Mix
93 Tremolo On Off
94 Tremolo Sync On Off
95 Tremolo Sync
102 Tremolo Rate
103 Tremolo Depth
104 Tremolo Attack
105 Tremolo Release
106 Tremolo Phase
107 Tremolo Spread
108 Distortion On Off
109 Distortion Mode
110 Distortion Drive
111 Distortion Drive Mod Amount
112 Distortion Drive Mod Source
113 Distortion Rectify
114 Distortion Rectify Mod Amount
115 Distortion Rectify Mod Source
116 Distortion Mix
117 Distortion Mix Mod Amount
118 Distortion Mix Mod Source
119 Convolution On Off
128 Convolution Mode
129 Convolution Pre Delay
130 Convolution Pre Delay Mod Amount

131 Convolution Pre Delay Mod Source
132 Convolution Quality
133 Convolution Quality Mod Amount
134 Convolution Quality Mod Source
135 Convolution Width
136 Convolution Width Mod Amount
137 Convolution Width Mod Source
138 Convolution Decay
139 Convolution Mix
140 Convolution Mix Mod Amount
141 Convolution Mix Mod Source
142 Reverb On Off
143 Reverb Time
144 Reverb Time Mod Amount
145 Reverb Time Mod Source
146 Reverb Pre Delay
147 Reverb Pre Delay Mod Amount
148 Reverb Pre Delay Mod Source
149 Reverb Low Cut
150 Reverb Low Cut Mod Amount
151 Reverb Low Cut Mod Source
152 Reverb High Cut
153 Reverb High Cut Mod Amount
154 Reverb High Cut Mod Source
155 Reverb Damping
156 Reverb Damping Mod Amount
157 Reverb Damping Mod Source
158 Reverb Mix
159 Reverb Mix Mod Amount
160 Reverb Mix Mod Source
161 Pan
162 Pan Mod Amount
163 Pan Mod Source
164 Master Level
165 High Pass 12 Filter On Off
166 Poly On Off
167 Master Level Mod Amount
168 Master Level Mod Source

12 Device Remote information

Scope	
Manufacturer	Model
Oenkenstein Audio	nl.oenkenstein.RUMBLER

Remotable	Min	Max	Input type	Output type
Saw Oscillator Level	0	4194304	Value	ValueOutput
Saw And Square Oscillator Amount	0	6	Value	ValueOutput
Saw And Square Oscillator Detune	0	4194304	Value	ValueOutput
Saw And Square Osc Lvl Mod Amount	0	4194304	Value	ValueOutput
Saw And Square Osc Lvl Mod Source	0	11	Value	ValueOutput
Square Oscillator Level	0	4194304	Value	ValueOutput
Saw And Square Oscillator Tune	0	72	Value	ValueOutput
Saw And Square Osc Tune Mod Amount	0	4194304	Value	ValueOutput
Saw And Square Osc Tune Mod Source	0	11	Value	ValueOutput
Wave Osc Level	0	4194304	Value	ValueOutput
Wave Osc Level Mod Amount	0	4194304	Value	ValueOutput
Wave Osc Level Mod Source	0	11	Value	ValueOutput
Wave Osc Select	0	227	Value	ValueOutput
Wave Osc Tune	0	4194304	Value	ValueOutput
Wave Osc Fine Tune	0	4194304	Value	ValueOutput
Wave Osc Tune Mod Amount	0	4194304	Value	ValueOutput
Wave Osc Tune Mod Source	0	11	Value	ValueOutput
Amp Envelope To Level On Off	0	1	Toggle	ValueOutput
Envelope Delay Time	0	99	Value	ValueOutput
Envelope Attack	0	100	Value	ValueOutput
Envelope Attack Curve	0	4194304	Value	ValueOutput
Envelope Attack Mod Amount	0	4194304	Value	ValueOutput
Envelope Attack Mod Source	0	11	Value	ValueOutput
Envelope Hold	0	100	Value	ValueOutput
Envelope Hold Mod Amount	0	4194304	Value	ValueOutput
Envelope Hold Mod Source	0	11	Value	ValueOutput
Envelope Decay	0	100	Value	ValueOutput
Envelope Decay Curve	0	4194304	Value	ValueOutput
Envelope Decay Mod Amount	0	4194304	Value	ValueOutput
Envelope Decay Mod Source	0	11	Value	ValueOutput
Envelope Sustain	0	4194304	Value	ValueOutput
Envelope Sustain Mod Amount	0	4194304	Value	ValueOutput
Envelope Sustain Mod Source	0	11	Value	ValueOutput
Envelope Release	0	100	Value	ValueOutput
Envelope Release Curve	0	4194304	Value	ValueOutput
Envelope Release Mod Amount	0	4194304	Value	ValueOutput
Envelope Release Mod Source	0	11	Value	ValueOutput
LFO_Shape	0	5	Value	ValueOutput
LFO Rate	0	80	Value	ValueOutput
LFO Retrigger On Off	0	1	Toggle	ValueOutput
LFO Rate Mod Amount	0	4194304	Value	ValueOutput
LFO Rate Mod Source	0	11	Value	ValueOutput
Ring Modulation Level	0	4194304	Value	ValueOutput

Ring Modulation Harmonic	0	72	Value	ValueOutput
Ring Modulation Disharmonic	0	100	Value	ValueOutput
Ring Modulation Mod Amount	0	4194304	Value	ValueOutput
Ring Modulation Mod Source	0	11	Value	ValueOutput
Shaper Mode	0	3	Value	ValueOutput
Shaper Drive Mod Amount	0	4194304	Value	ValueOutput
Shaper Drive Mod Source	0	11	Value	ValueOutput
EQ Gain	0	4194304	Value	ValueOutput
EQ Band Width	0	100	Value	ValueOutput
EQ Band Frequency	0	100	Value	ValueOutput
EQ Band Frequency Mod Amount	0	4194304	Value	ValueOutput
EQ Band Frequency Mod Source	0	11	Value	ValueOutput
Low Pass 12 Filter On Off	0	1	Toggle	ValueOutput
Low Pass 12 Cutoff	0	4194304	Value	ValueOutput
Low Pass 12 Cutoff Key Track	0	4194304	Value	ValueOutput
Low Pass 12 Cutoff Mod Amount	0	4194304	Value	ValueOutput
Low Pass 12 Cutoff Mod Source	0	11	Value	ValueOutput
Low Pass 12 Resonance	0	4194304	Value	ValueOutput
Low Pass 12 Resonance Key Track	0	4194304	Value	ValueOutput
Low Pass 12 Resonance Mod Amount	0	4194304	Value	ValueOutput
Low Pass 12 Resonance Mod Source	0	11	Value	ValueOutput
Chorus On Off	0	1	Toggle	ValueOutput
Chorus Rate	0	100	Value	ValueOutput
Chorus Depth	0	100	Value	ValueOutput
Chorus Delay	0	100	Value	ValueOutput
Chorus Voices Amount	0	2	Value	ValueOutput
Chorus Mix	0	4194304	Value	ValueOutput
Delay On Off	0	1	Toggle	ValueOutput
Delay Sync On Off	0	1	Toggle	ValueOutput
Delay Sync	0	12	Value	ValueOutput
Delay Time	0	100	Value	ValueOutput
Delay Feedback	0	4194304	Value	ValueOutput
Delay Ratio	0	100	Value	ValueOutput
Delay Damping	0	100	Value	ValueOutput
Delay Mix	0	4194304	Value	ValueOutput
Tremolo On Off	0	1	Toggle	ValueOutput
Tremolo Sync On Off	0	1	Toggle	ValueOutput
Tremolo Sync	0	12	Value	ValueOutput
Tremolo Rate	0	100	Value	ValueOutput
Tremolo Depth	0	4194304	Value	ValueOutput
Tremolo Attack	0	4194304	Value	ValueOutput
Tremolo Release	0	4194304	Value	ValueOutput
Tremolo Phase	0	4194304	Value	ValueOutput
Tremolo Spread	0	4194304	Value	ValueOutput
Distortion On Off	0	1	Toggle	ValueOutput
Distortion Mode	0	1	Toggle	ValueOutput
Distortion Drive	0	4194304	Value	ValueOutput
Distortion Drive Mod Amount	0	4194304	Value	ValueOutput
Distortion Drive Mod Source	0	3	Value	ValueOutput
Distortion Rectify	0	4194304	Value	ValueOutput
Distortion Rectify Mod Amount	0	4194304	Value	ValueOutput
Distortion Rectify Mod Source	0	3	Value	ValueOutput
Distortion Mix	0	4194304	Value	ValueOutput
Distortion Mix Mod Amount	0	4194304	Value	ValueOutput

Distortion Mix Mod Source	0	3	Value	ValueOutput
Convolution On Off	0	1	Toggle	ValueOutput
Convolution Mode	0	9	Value	ValueOutput
Convolution Pre Delay	0	4194304	Value	ValueOutput
Convolution Pre Delay Mod Amount	0	4194304	Value	ValueOutput
Convolution Pre Delay Mod Source	0	3	Value	ValueOutput
Convolution Quality	0	4194304	Value	ValueOutput
Convolution Quality Mod Amount	0	4194304	Value	ValueOutput
Convolution Quality Mod Source	0	3	Value	ValueOutput
Convolution Width	0	4194304	Value	ValueOutput
Convolution Width Mod Amount	0	4194304	Value	ValueOutput
Convolution Width Mod Source	0	3	Value	ValueOutput
Convolution Decay	0	4194304	Value	ValueOutput
Convolution Mix	0	4194304	Value	ValueOutput
Convolution Mix Mod Amount	0	4194304	Value	ValueOutput
Convolution Mix Mod Source	0	3	Value	ValueOutput
Reverb On Off	0	1	Toggle	ValueOutput
Reverb Time	0	4194304	Value	ValueOutput
Reverb Time Mod Amount	0	4194304	Value	ValueOutput
Reverb Time Mod Source	0	3	Value	ValueOutput
Reverb Pre Delay	0	100	Value	ValueOutput
Reverb Pre Delay Mod Amount	0	4194304	Value	ValueOutput
Reverb Pre Delay Mod Source	0	3	Value	ValueOutput
Reverb Low Cut	0	100	Value	ValueOutput
Reverb Low Cut Mod Amount	0	4194304	Value	ValueOutput
Reverb Low Cut Mod Source	0	3	Value	ValueOutput
Reverb High Cut	0	100	Value	ValueOutput
Reverb High Cut Mod Amount	0	4194304	Value	ValueOutput
Reverb High Cut Mod Source	0	3	Value	ValueOutput
Reverb Damping	0	100	Value	ValueOutput
Reverb Damping Mod Amount	0	4194304	Value	ValueOutput
Reverb Damping Mod Source	0	3	Value	ValueOutput
Reverb Mix	0	4194304	Value	ValueOutput
Reverb Mix Mod Amount	0	4194304	Value	ValueOutput
Reverb Mix Mod Source	0	3	Value	ValueOutput
Pan	0	100	Value	ValueOutput
Pan Mod Amount	0	4194304	Value	ValueOutput
Pan Mod Source	0	11	Value	ValueOutput
Master Level	0	4194304	Value	ValueOutput
High Pass 12 Filter On Off	0	1	Toggle	ValueOutput
Poly On Off	0	1	Toggle	ValueOutput
Master Level Mod Amount	0	4194304	Value	ValueOutput
Master Level Mod Source	0	11	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