Rave Generation

PRESENTS

FILTERBANK

USER MANUAL

1.0 Introduction

Welcome to Rave Generation: Filterbank. This powerful audio plugin brings your tracks to life with advanced filtering, dynamic modulation, and distortion effects. Designed for producers, sound designers, and performers, Filterbank provides extensive control over your audio with a user-friendly interface and professional-grade sound manipulation tools.

Whether you're crafting experimental soundscapes or enhancing your mix with innovative filtering, Filterbank is here to expand your creative possibilities.

1.1 Key Features

Rave Generation: Filterbank offers a wide range of features that empower you to shape your sound with precision. Below are some of the key capabilities that set this plugin apart:

- Dual Filters: Features two independent filters (Filter 1 and Filter 2), each offering low-pass, band-pass, and high-pass blending. This provides enhanced flexibility and depth for sound shaping, with resonance controls that add rich tonal complexity.
- Advanced Modulation: Utilize LFOs, ADSR, and AR envelopes for precise control over the filter cutoff frequencies, resonance, and more. AR controls amplitude modulation, while ADSR modulates filter cutoff frequencies for dynamic and evolving sound shaping.
- Distortion & Overdrive: Introduce analog warmth or aggressive distortion to your signal with customizable distortion modes, including clean, warm, crunch, and edge. The distortion stage also includes dynamic asymmetry for harmonic variation and precomputed weight sums for smoother processing.
- Oversampling Support: Benefit from high-quality audio processing with reduced aliasing for pristine sound, especially useful when engaging high frequencies or aggressive distortion.
- MIDI Control: Fully compatible with MIDI CC, allowing real-time modulation of parameters, including trigger sources for ADSR and AR envelopes.
- Pitch Tracking: Track incoming pitch for dynamic modulation of the filter’s cutoff frequency, based on the incoming pitch of your sound. This feature adds versatility to musical performances, making the plugin more responsive to live input.
- Comprehensive Parameter Control: Fine-tune every aspect of the filters, modulation, and distortion to sculpt your sound.

2.0 User Interface

The user interface of Rave Generation: Filterbank provides easy access to all the plugin's features. Below is an overview of the main controls.

2.1 Input/Output Controls

- INPUT: Controls the input gain for the signal entering the filterbank.
- OUTPUT: Adjusts the final output gain after all processing.
- BYP<>EFF: Controls the balance between the bypassed (dry) and processed (wet) signals, useful for comparing the processed sound with the original.

2.2 Filter Controls

- HI BOOST/HI CUT: Engages a high-pass filter (HI) and a low-pass filter (CUT) to shape the high-frequency response, allowing precise control over your signal's harmonic content.
- FREQ 1 (Filter 1 Frequency): Sets the cutoff frequency for Filter 1. This controls the frequency range passed by the filter, enabling low-pass, high-pass, or band-pass behavior based on the filter mode.
- FREQ 2 (Filter 2 Frequency): Sets the cutoff frequency for Filter 2, which can be used in combination with Filter 1 for more complex filtering or serial filtering configurations.
- RESO 1 (Filter 1 Resonance): Adjusts the resonance (feedback) for Filter 1, increasing resonance to emphasize frequencies near the cutoff point and creating a more pronounced sound.
- RESO 2 (Filter 2 Resonance): Controls the resonance for Filter 2, providing the same effect as RESO 1 but for Filter 2.
- LBH 1 (Low-Band-High Filter 1): Adjusts the balance between low-pass, band-pass, and high-pass filtering modes for Filter 1.
- LBH 2 (Low-Band-High Filter 2): Same as LBH 1 but for Filter 2.
- BLH 1 (Band-Low-High Correction 1): Controls the balance and correction between the three filter types in Filter 1.
- BLH 2 (Band-Low-High Correction 2): Same as BLH 1 but for Filter 2.

2.3 Modulation Controls

- ADSR AMOUNT 1: Controls the modulation amount of the ADSR (Attack, Decay, Sustain, Release) envelope for Filter 1, influencing how dynamically the filter responds to changes in the envelope.
- ADSR AMOUNT 2: Modulates the ADSR envelope for Filter 2, shaping the filter's frequency response over time.
- SPEED: Sets the speed for LFO modulation, affecting how quickly the modulation cycles. Faster speeds produce more rapid filter sweeps, while slower speeds create evolving movements.
- DEPTH: Adjusts the depth (intensity) of the LFO effect on the cutoff frequencies of both filters.
- LFO MODE: Select between different modes for the Low-Frequency Oscillator (LFO), such as normal, restart, or sawtooth modulation, each offering different rhythmic or evolving effects.
- LFO SYNC: Enables synchronization of the LFO with the DAW's tempo, ensuring rhythmic modulation that stays in time with your project.
- AM (Amplitude Modulation): Controls the depth of amplitude modulation (AM), adding dynamic variation to the signal and creating evolving textures.
- FM (Frequency Modulation): Adjusts the amount of frequency modulation applied to both filters, allowing for complex sonic transformations.

2.4 Envelope and Trigger Controls

- SENSITRIG/LIMIT SWITCH: Select between three modes: Sensitrig, Normal, and Limit. This determines the trigger sensitivity of the AR and ADSR envelopes, allowing for different levels of responsiveness.
- +OCTAVE/+QUINT SWITCH: Set the transposition mode for the filters, enabling octave shifts or harmonic tracking to better match the pitch of your incoming audio.
- TRACK/TRACK LOW SWITCH: Activates pitch tracking for dynamic modulation of the filter's cutoff frequency, based on the incoming pitch, adding musicality and expressiveness to the filtering process.
- A (Attack): Controls the attack time for the AR envelope, influencing how quickly the modulation reaches its peak.
- R (Release): Sets the release time for the AR envelope, defining how quickly the effect subsides when the trigger is released.
- ADSR MODE: Switch between standard ADSR mode, Freeze mode, or Envelope Follower mode for different envelope behaviors.
- AR TRIGGER: Defines the trigger source for the AR envelope (e.g., sidechain or MIDI input).
- ADSR TRIGGER: Defines the trigger source for the ADSR envelope, allowing modulation from various sources such as audio or MIDI.

2.5 Distortion and Saturation Controls

- DISTORTION MODE: Choose between different distortion modes, such as clean, warm, crunch, or edge, each providing a unique flavor to the signal.
- THD DRIFT: Affects the drift of total harmonic distortion, adding subtle movement and variation to the distortion for a more organic, analog feel.

2.6 Noise and Miscellaneous Controls

- NOISE: Introduces pink noise into the signal path, which can be used creatively for adding texture, randomness, or background noise to the sound.
- OVERSAMPLE: Activates oversampling to improve the quality of the audio, particularly useful for high-frequency signals or aggressive distortion, ensuring cleaner sound at higher frequencies.

2.7 MIDI Controls

When the AR Trigger or ADSR Trigger is set to MIDI mode, you can control the triggering behavior via MIDI note messages. These controls allow precise timing and triggering from your MIDI controller, integrating Filterbank into live performance or MIDI-based production setups.

MIDI Note	Function	Behavior
60 (C4)	Unblock ADSR	Allows ADSR to trigger from audio or MIDI.
61 (C#4)	Block ADSR	Prevents ADSR from triggering (audio or MIDI blocked).
62 (D4)	Unblock AR	Allows AR to trigger from audio or MIDI.
63 (D#4)	Block AR	Prevents AR from triggering (audio or MIDI blocked).
66 (F#4)	Normal Trigger ADSR	Triggers the ADSR envelope normally.
70 (A#4)	Normal Trigger AR	Triggers the AR envelope normally.
68 (G#4)	Normal Trigger Both	Simultaneously triggers both AR and ADSR envelopes.
65 (F4)	Trigger ADSR	Triggers ADSR with instant attack.
67 (G4)	Gate-Off ADSR	Forces gate-off of ADSR with instant release.
69 (A4)	Trigger AR	Triggers AR with instant attack.
71 (B4)	Gate-Off AR	Forces gate-off of AR with instant release.

Note on Octave Labeling:
- MIDI note 60 corresponds to Middle C (C4).
- Some DAWs (e.g., Ableton, Logic, Studio One) may label this note as C3. This is simply a labeling difference, and the functionality remains the same.

3.0 Notes

From the dual-filter system and advanced envelope modulation to the rich distortion effects and pitch tracking, Filterbank offers endless possibilities for exploration. Whether you're crafting intricate soundscapes, adding depth to your mix, or performing live, Filterbank provides the flexibility and power you need to shape your sound exactly as you envision.

The intuitive user interface ensures that both beginners and advanced users can easily navigate and utilize the plugin to its full potential. The detailed control over every parameter allows for both subtle adjustments and extreme sonic manipulations, enabling you to experiment, discover new textures, and fine-tune your sound with ease.

To ensure top-notch audio performance, Filterbank supports high-quality oversampling, allowing for pristine sound without compromise, even during high-intensity processing. It also integrates seamlessly with your MIDI setup, giving you real-time modulation control during performances or productions.

As part of the Rave Generation suite, Filterbank continues the brand's mission of providing top-tier audio tools that empower you to push creative boundaries and elevate your music production. With Filterbank in your toolkit, the only limit is your imagination.

Note on Filter Self-Oscillation: The filters in Filterbank are capable of self-oscillation at high resonance settings, especially when combined with LFO and FM modulation. This can result in loud, sustained tones. To stop unwanted self-oscillation and feedback loops after playback, reduce the resonance levels on the affected filter(s). Use caution when using high resonance.

Note on GUI limitation: Logic Pro is unable to resize UI background.

For more resources, updates, and preset packs, visit ravegeneration.io. Dive deeper into the world of audio manipulation and discover new ways to bring your tracks to life.

4.0 Installation & Troubleshooting

4.1 System Requirements

Before installing Rave Generation: Filterbank, please ensure that your system meets the following requirements:

- Operating System:
  - macOS 10.13 or later
  - Windows 10 or later
- Software: Digital Audio Workstation (DAW) that supports VST3, or AU plugins (e.g., Ableton Live, Logic Pro, Studio One, FL Studio, etc.).
- Processor: Intel Core i5 (or equivalent) or higher for optimal performance.
- RAM: 4 GB minimum (8 GB or more recommended for larger projects).
- Disk Space: 200 MB of free disk space for installation.

4.2 Installation Process

1. Download the installation file from the official website or the platform where you purchased the plugin.
2. Run the installer and follow the on-screen instructions.
3. Launch your DAW and locate Rave Generation: Filterbank in your plugin list.
4. If prompted, activate the plugin using the license key provided upon purchase.

4.3 Troubleshooting

If you encounter any issues during installation or operation, try the following solutions:

- Plugin Not Showing in DAW: Ensure that the plugin folder path is correctly set within your DAW's plugin manager.
- Activation Issues: Double-check your internet connection and ensure you are entering the correct license key.