

ELECTROGENE

USER'S GUIDE



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1 INTRODUCTION

1.1 ABOUT ELECTROGENE

Electrogene is a low fidelity audio effect combining bit-crusher, modulation, saturation and filter with scope visualizer. Refined algorithms can produce warm or harsh sound reminding retro digital or analog audio system.

1.2 KEY FEATURES

- Modify sample rate and bit resolution
- Apply drift variance to the bit-crusher sample rate value
- Add frequency modulation to input signal
- Band, Low or High pass filter
- Set pre-gain and dry/wet levels
- Background audio
- Audio Unit Extension, Audiobus, Inter-App Audio support
- 30 built-in presets
- Ability to save and randomize parameters
- Realtime waveform scope visualizer

1.3 ELECTROGENE SCREEN OVERVIEW

Electrogene interface consists of preset menu and parameter controls shown on Figure 1

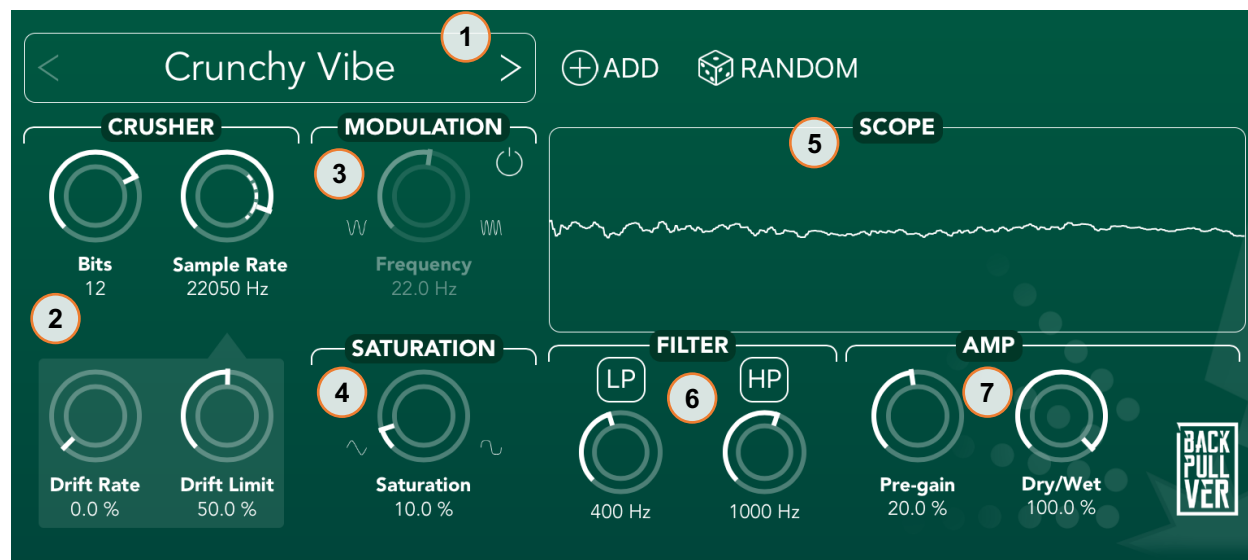


Figure 1 - Main screen 1 – preset menu; 2 – crusher module; 3 – modulation; 4 – modulation module; 5 – scope indicator; 6 – filter module; 7 – amplification;

Electrogene audio effect consist of below blocks:

Preset menu

- list of build-in and user presets
- add user preset button
- randomize parameters button

Crusher

- Sample Rate
- Bit resolution
- Drift rate and limit

Modulation

- Frequency Rate
- On/Off knob

Saturation

- Amount control

Filter

- Low pass with on/off control
- High pass with on/off control
- Band pass with on/off control

Amp

- Pre-gain level
- Dry/wet level

2 PRESETS

Figure 2 describes the preset menu functions



Figure 2 - presets 1 – preset menu navigation; 2 – add preset; 3 – generate random preset

2.1 PRESET MENU

Tap on preset name to expand available preset list and select preset to load it. Use “<” and “>” for navigating to previous or next preset from list. User preset can be shared by swiping preset row to the left. For import preset, select “IMPORT” in user section.



2.2 ADD

Save current preset for later use.

2.3 RANDOM

By touching the random button, a new preset will be generated with random parameter values.

When Electrogene is started in stand-alone mode, audio input is muted to avoid feedback loop on higher volume e.g. when using microphone as audio input. Before unmuting ensure that the volume is set to lower value.

3 CRUSHER MODULE

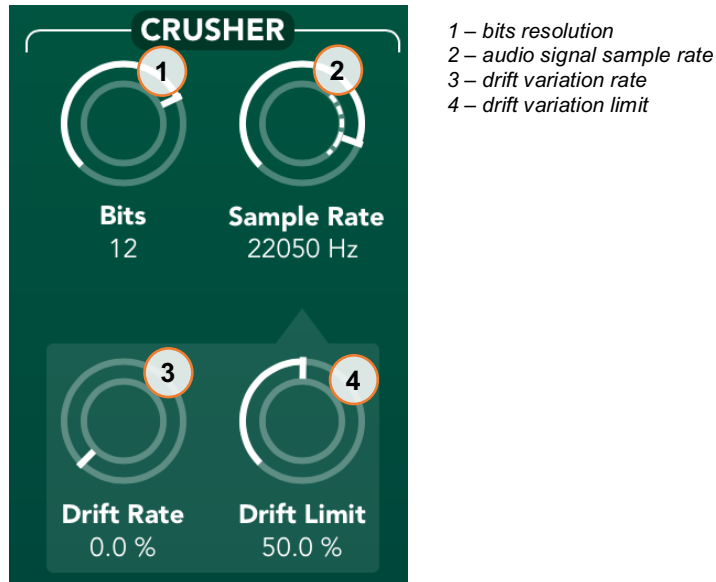


Figure 3 - crusher

The main module of Electrogene is used to reconstruct the sound simulating different variations of sample rate and bit resolution of audio signal. In addition, there is a drift function to give variations in sample rate parameter.

3.1 SAMPLE RATE

Digital audio is represented by samples that encapsulate the different amplitude of the wave form. Turning the knob to higher value will lead to maximum fidelity of the signal and turning low will reduce it.

3.2 DISTORTION

Encoded audio is stored in memory in series of integers. Larger number of bits present more accurately the audio waveform signal path, lowering the bits will sound more like old console game, retro synth or early drum sampler.

3.3 DRIFT RATE

Internally there is an algorithm for changing sample rate reduction randomly around the current selected sample rate. Low rate will change sample rate more smoothly, higher rate will lead to more rapid sample rate change. The changed sample rate value depends on drift limit explained below.

3.4 DRIFT LIMIT

When drift rate is more than 0.0%, drift limits the random generated value which will change the sample rate. Lower the limit for more slight changes in sample rate, turn high for increase diapason of sample rate changes.

4 MODULATION

Modulation is added to Electrogene for additional tweak of the sound.

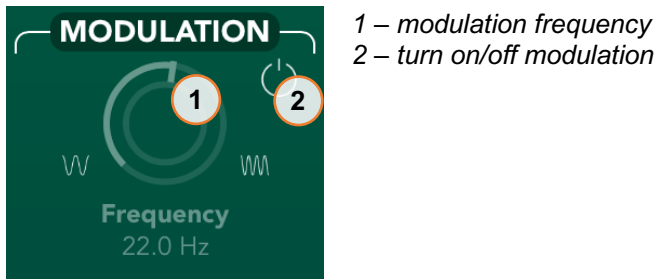


Figure 4 - modulation

5 SATURATION

Add warm saturation like the sound is recorded on tape and played back.

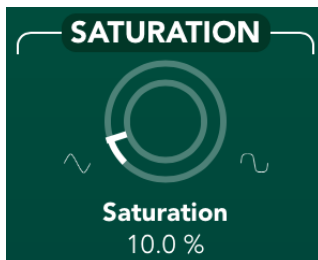


Figure 5 - saturation

6 FILTER

One-pole filter with low and high pass sections. Band pass mode is activated when both low and hi pass buttons are selected.

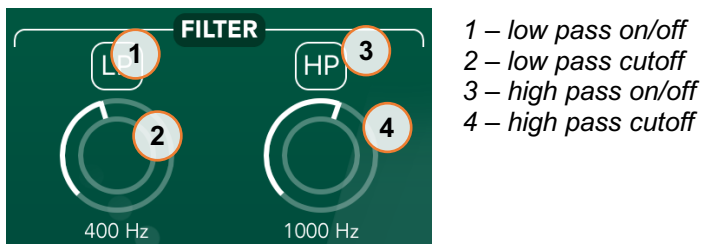


Figure 6 - filter

7 AMP

A classical audio amplification module is added with pre-gain and dry/wet of the signal.

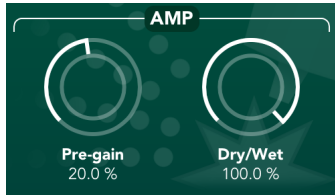


Figure 7 – amp

8 SCOPE

Real time scope visualizer is representing the produced wave form signal.

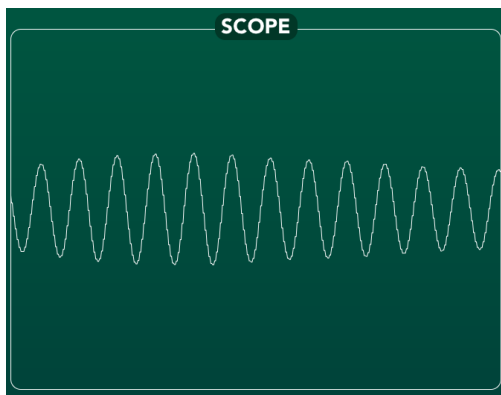


Figure 8 - scope

9 FEEDBACK AND SUPPORT

If you have questions or suggestions about Electrogene application, please contact us.

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