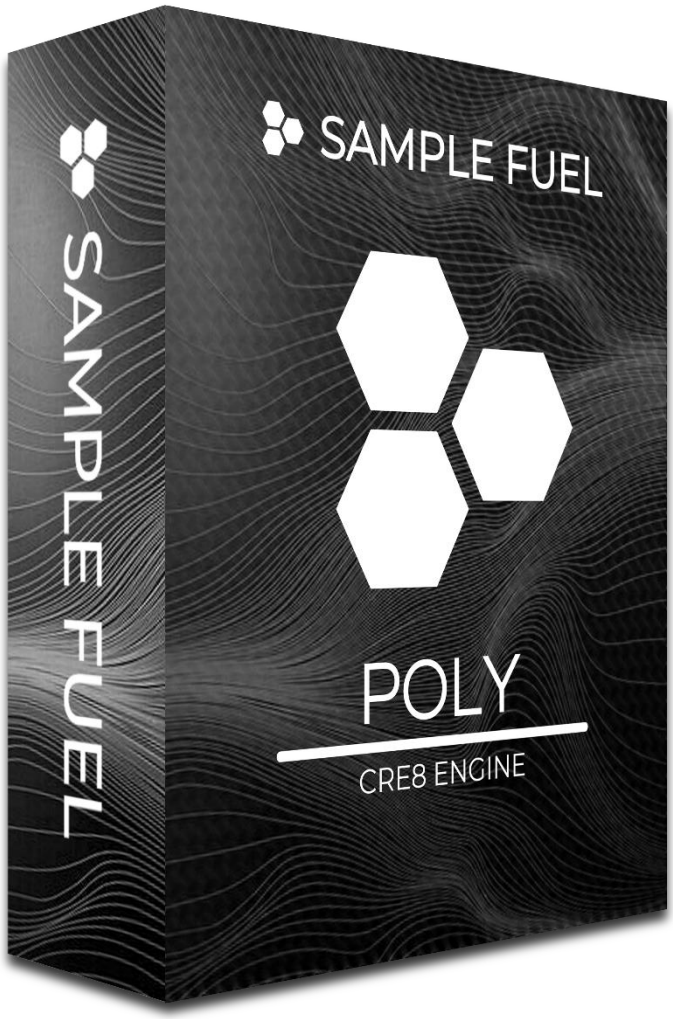
SAMPLE FUEL



This PDF provides improved access for vision-impaired users. Please note that due to the complexity and number of images in this document, it is not possible to include text descriptions of images.

Release Date: December 1, 2021

New in the 3.0 Update

- New LFO Graphics
- Super Attack Fader
- New Gate Modulation
- New Drift Knobs for each oscillator
- Over 800 program presets
- New User Envelope Grid Multiplier and Divider
- New User Envelope “LFO” presets
- Lo Pass and Hi Pass Filter Type pull-down on the Simple Page

Table of Contents

POLY is the first instrument in a series of instruments that utilizes our simple and intuitive ***CRE8*** Engine powered by Steinberg's *FREE* HALion Sonic SE platform. Furthermore, you can load the instrument set as a program in HALion, HALion Sonic, and HALion Sonic SE. For further instructions on how to use HALion Sonic SE, HALion Sonic and HALion, follow the link below to find their respective manuals:

- Steinberg Help

Intuitive and flexible with the focus on quick and easy workflow is the concept behind our ***CRE8*** Engine. ***Poly*** is a Modern Classic 3 oscillator synth with up to 8 de-tunable voices and includes Sub, Noise Oscillators and Ring Modulator. Presets have up to 2 Layers and you can load patches in up to 16 slots that can be used multi-timbral or layered by assigning patches to the same midi channel. The main concept behind its design is to provide you with a "SIMPLE Page" that provides all the functionality you would reach for during composing or performing. Of course, there is an incredible amount of functionality and sound design capabilities contained in the additional pages we provide all with the same concept of being simple and intuitive.

Loading the VST Sound Instrument Set

To load the instrument set in HALion, HALion Sonic, or HALion Sonic SE, load any of the presets that come with the ***POLY CRE8*** library.

Loading and Saving Presets

When you are working with a Steinberg DAW, the Load and Save dialogs contain

MediaBay functionality, allowing you to make use of tags, for example.

- To load a preset, click the name field in the plug-in functions section and select the preset in the dialog.
- When a preset is loaded, you can step through the available presets using the left and right arrow buttons to the left of the preset name field.
- To save a preset, click the floppy disk icon to the right of the preset name and enter a name for the preset.
- In a non-Steinberg DAW, you can only save presets in the predefined folder or a subfolder of this folder. If you save presets using the preset manager of the DAW that you are using, these presets are only accessible within this DAW and not in other host applications.

Plug-In Controls

Performance Control Section

The performance control section in the lower part of the plug-in panel contains additional elements that can *quickly* modify the instrument playback: Quick Controls, Sphere and Trigger Pads.

Quick Controls

The eight potentiometer controls at the bottom are called quick controls. They allow you to remote-control the most important sound parameters for the preset. The quick control assignments cannot be modified in the VST Sound Instrument Set. You can modify the assignments in HALion or HALion Sonic.

In ***POLY CRE8,*** these 8 pre-assigned controls are assigned to both layers allowing you to control for example the cutoff filter offset for both layers at the same time with one knob.

The Motion knob can control all the motion and pulsing of a patch. It defaults to full motion but can dial the motion all the way down to no movement at all. A very creative way to control many LFO's, Step Filters, and User Envelopes all with one simple knob.

**** PAN LFO, OSC LFOs and the ARP is excluded from the Motion Quick control knob.***

Sphere

The sphere is the ball on the bottom right of the HALion products. It is a two-dimensional control, which allows you to adjust two quick controls simultaneously by dragging the mouse horizontally and vertically within the sphere. The Sphere assignments cannot be modified in the VST Sound Instrument Set. You can modify the assignments in HALion or HALion Sonic.

In ***POLY CRE8***, the Sphere controls are pre-assigned to Hi Pass Filter Cutoff and Resonance for both layers.

The small triangles for indicating the horizontal and the vertical axis are only available if parameters are assigned to Sphere H and V.

Center Horizontal/Center Vertical

You can set up the sphere to stay where you move it to or return to the center automatically. This can be defined for each axis separately.

To do so, right click the Sphere and activate or deactivate the “Center Horizontal” or “Center Vertical” options on the context menu for the sphere.

Trigger Pads

You can use the trigger pads on the left to remotely trigger single notes or whole chords. Many of the presets make use of the trigger pads.

- Pads with a colored frame have single notes or whole chords assigned.
- The line above a pad lights up when the pad switches between FlexPhraser variations.
- To trigger a pad with your mouse, simply click the corresponding pad.

In ***POLY CRE8,*** these 8 Trigger pads are assigned to the Arpeggiater's 8 possible patterns. These can be triggered "on the fly" all without losing sync in real time. This allows you to perform pattern switches in real time creating almost endless pattern possibilities from the 8 available "live" patterns. Once you play around with this feature it becomes a very powerful creative tool.

The pads can also be assigned to the 8 patterns on the Midi Player page as well. Patterns are set via drag and drop from the number 1-8 buttons on the Arp or Midi Player page. All patches that utilize the Arp or Midi Player are pre-configured to trigger from these pads by default.

In the upper left corner of the trigger pad window is a pull-down that contains 2 presets. One configures the pads to trigger via the bottom 8 keys of an 88-key controller. The second will trigger notes below the keyboard range (C#-2 thru G#-2). The pre-configured Touchosc and Liine Lemur templates included will trigger these notes from the Tablet preset.

Assigning Trigger Notes to Pads

You can assign a MIDI note to a pad and trigger the pad by playing this note. Proceed as follows:

1. Right-click the pad.
2. From the menu, select “Assign Trigger Note”.
3. From the submenus, select the octave and note that you want to assign.

Or:

1. Right-click the pad.
2. From the context menu, select “Learn Trigger Note”.
3. Play the note on your MIDI keyboard or click the note on the virtual keyboard. The name of the MIDI note that you assigned as trigger note is displayed in the top left corner of the pad.

Keys that serve as trigger notes light up in blue on the virtual keyboard. These keys no longer play sounds, but trigger the corresponding pads.

Removing Trigger Note Assignments

To remove a trigger note from a pad, proceed as follows:

1. Right-click the pad.
2. From the context menu, select “Forget Trigger Note”.

Macro Page Parameters

The Macro pages for the ***POLY CRE8*** VST Sound Instrument set is divided into 8 pages.

Automating Parameters

All of the Macro page parameters can be automated, except for the Mono and Poly parameters in the Master section and the Step, Level, and Snap parameters in the Stepmod section on the Motion Section.

SIMPLE/ADVANCED PAGES

THE SIMPLE PAGE

The SIMPLE Page allows the user to make quick tweaks to the instrument without being overwhelmed by too many parameters. This page is split into 4 different sections.

- Uppser Section contains:
  - **SIMPLE/ADVANCED** Switches: These switch between the SIMPLE or ADVANCED views
  - **Layer Bypass**: This will Byapss the currently viewed layer.
  - **Layer Lo Pass** Cutoff and Resonance
  - **Layer Pitchbend Parameters**
  - **Layer Pan**
  - **Layer Main Volume**
  - **Layer Course Tune and Octave Control**
  - **Midi Player Bypass**: switches Midi Player state On or Off
  - **Arpeggiator Bypass**: switches Arpeggiator On or Off
  - **Arpeggiator Octave**: Changes the Octaves used in the Arpeggiator
  - **Layer Hi Pass Cutoff and Resonance**
- Upper Middle Section:
  - Oscillator Preset Menu: This changes between different oscillator combinations
  - Oscillator 1, 2 and 3 controls:
    - **Bypass**: switches oscillator state On or Off
    - **Octave**: changes octave of oscillator

        - **Tune**: tunes the oscillator in cents
        - **Level**
        - **Waveform Type**: chooses between 16 different waveform types per oscillator
        - **Waveform Shape**: morphs the waveform shape of the oscillator
    - Sub Oscillator Controls:
        - **Bypass**: switches the sub oscillator state On or Off
        - **Level**
        - **Waveform Type**: chooses between 6 different waveform types
        - **Retrigger Mode**: chooses between 3 different retrigger modes
    - Noise Oscillator Controls:
        - **Bypass**: switches oscillator state On or Off
        - **Level**
        - **Noise** Types: chooses between 4 different Noise types
    - Ring Modulator Controls:
        - **Bypass**: switches oscillator state On or Off
        - **Level**
        - **Source 1:** allows the user to choose between Osc 1 or the Sub Osc
        - **Source 2:** allows the user to choose between Osc 2 or Osc 3
- Lower Middle Section:
    - **Amplitude Envelope Controls**: Attack Offset, Decay Offset, Release Offset, Ssutain Offset, AmplitudVelocity
    - **Filter Controls**: Cutoff, Filter Types, Resonace, Filter Envelope Amount, Distortion, Distortion Types, Filter Velocity
- Lower Section
    - Motion: Contains two preassigned LFO's. On assigned to Volume and the other to Pan. Each LFO contains:
        - **Bypass**: switches LFO state On or Off
        - **Waveform Type**: chooses between 8 different waveform types per LFO
        - **Retrigger Mode**: chooses between 3 different retrigger modes
        - **Amount**: controls the amount the LFO effects the signal
        - **Rate**: controls the frequency the LFO effects the signal
        - **Shape**: morphs the shape of the LFO waveform
        - **Phase**: changes the phase of the LFO waveform
    - Modulation Contains: Modwheel and Aftertouch modulation parameters such as:
        - **Bypass**
        - **Amount**
        - **Destination**

ADVANCED PAGE

The Advanced Page offers more complex controls and parameters to the user.

When switching to the ADVANCED Page, the Upper section remains fixed and is referred to as the Master Section. This section all about having instant access to all the parameters that you will use most of the time without the need to jump to other screens.

The Lower section is where you will find more in-depth parameters for the Oscillators, Motion Controls, FX, Arppegiator and Midi Player, and filter controls via XY Pads.

THE MASTER SECTION

The Master Section is all about having instant access to all the parameters that you will use most of the time without the need to jump to other screens. The master section is split into 3 different sections.

The Left Section includes SIMPLE/ADVANCED switches, Layer Bypass, Pitchbend Parameters, MIDI Player Bypass, Arpeggiator Bypass and Octave parameter, Unison Bypass, Unison Controls (Voices, Detune, Pan, Delay, Distribution), Main Volume, Level Meter, Octave, Course Tune, Fine Tune, Key Follow, Oscillator Volume and Pan. Voices parameters (Mono/Poly Switch, Polyphonic Count, Legato Mode), Glide parameters (Glide Bypass, Glide Amount, Glide Sync, Glide Fingered),

The Middle Section includes Mod Wheel parameters (Modwheel Bypass, amount and destination), AfterTouch parameters (AfterTouch Bypass, amount and destination), ADSR offset controls for both Amplitude and Filter, Filter Cutoff, Filter Type, Resonance, Envelope Amount, Distortion Level and Distortion Type, a fixed Hi Pass and Lo Pass Filter, Amplitude and Filter Velocity settings.

The Right Section provides two preassigned LFO's. One for Volume and one for Pan. Each LFO automatically syncs to the tempo and has amount, note division, shape and phase controls.

THE SYNTH SECTION

The Synth Section offers the user 3 oscillators, a Sub Oscillator, Ring Modulator, and a Noise Oscillator. The user is given 16 different oscillator types in each of the 3 main oscillators, 6 waveforms and 3 phase types for the Sub Oscillator, 2 source options for the Ring Modulator, and 4 Noise types for the Noise Oscillator allowing for a variety of combinations. We've has also included an "Osc Factory Presets" drop down menu to jump start the user's creative muse.

Each of the 3 main oscillators includes Octave, [Coarse] Tune, Fine Tune, Waveform, Retrigger Mode, Drift, Multi Oscillator functions and Level. Additionally, there is an LFO attached to each of the main Oscillators that modulates the Waveform knob when applicable*. The LFOs include the Waveform type, Rate slider, Shape slider, Amount slider and a bypass switch.

Some notable terminology:

Waveform Type:

- **CM** *(otherwise known as 'cross modulation)'* combines two oscillators (A and B). The B's pitch will be modulated by the A (sine, triangle, saw, or square) via the rate of the audio sample.
- **PWM** *(otherwise known as 'pulse width modulation'):* Specific only to the square wave, this allows the "Waveform" knob to alter the ratio of the values of a square wave.
- **Sync**: This provides multiple master and slave oscillator combinations via a hard sync oscillator. With each full wave cycle of the master oscillator, the slave oscillator is reset.
- **XOR**: *(otherwise known as 'exclusive OR')* An XOR operation utilizes and compares two square waves. The XOR operation will reset the waveform of a third oscillator (sine, triangle, saw, or square).

Multi Oscillator:

Multi Oscillator Number, Detune, and Pan each of the main oscillators offers these multi-oscillator functions. They allow you to create a richer sound by producing up to eight oscillators simultaneously.

- Number sets how many oscillators will play together.
- Detune will detune the oscillators.

- Pan allows you to narrow or widen the stereo panorama.

Retrigger Mode dictates 3 different modes: freely, random phase each time a note is triggered, or a fixed start phase.

- If Free Phase is selected, analog synthesizer behavior is emulated. It will run freely and continuously.
- If Random Phase is selected, with each trigger of a note the start phase is set to a different value randomly.
- If Fixed Phase is selected, the oscillator's start phase is fixed.

**** The Waveform knob only operates if the Sync, CM, XOR and PWM oscillator types are chosen.***

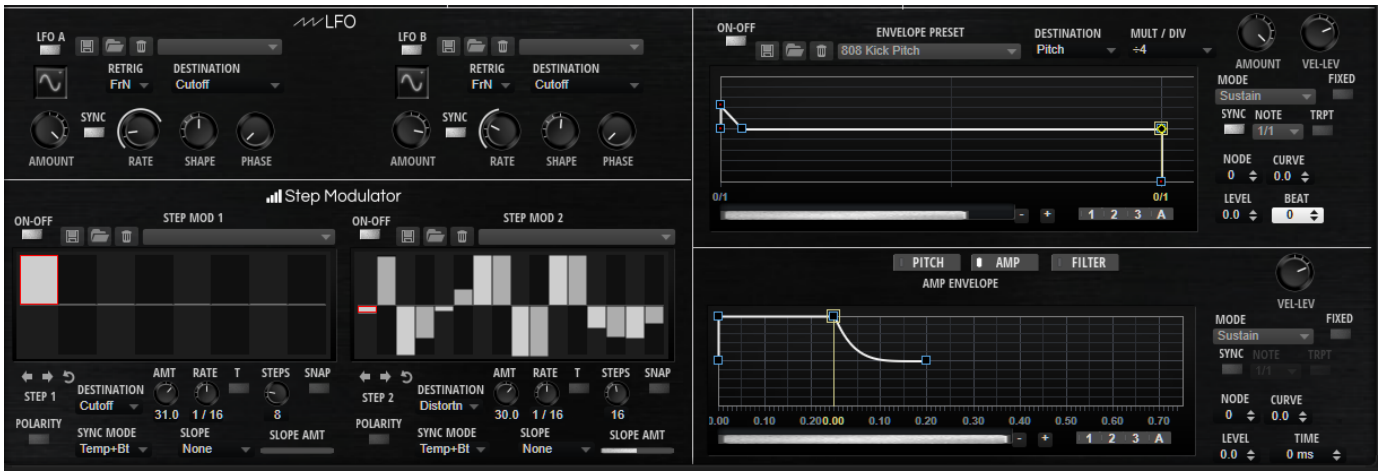
THE FX SECTION

The FX Section provides you with 18 different insert effects to enable or disable. The different effects are:

- Compressor
- Envelope Shaper
- Vintage Compressor which is at the end of the signal chain before the reverb to act like a "Mastering Compressor".
- Distortion module with 4 distortion effect types.
- Guitar Amplifier modeling effect. Control over amp heads and cabinets as well as microphone position.
- Chorus
- Phaser
- Flanger
- Ring Mod FX
- Stereo Widener
- Vintage Ensemble
- Main Synth Filter with VCF section that has 24 filter shapes and five distortion modes. There are also unique morphing filters that seamlessly blend between up to 4 out of 24 filter types via the XY Page.
- 4 Band Fully Parametric EQ
- Morph Filter with 2 filter shapes that can be controlled via the automatable XY controller right on the Morph Filter FX module.
- 2 independent stereo Delays with 3 modes.
- Efficient Algorithmic Reverb with many parameters to tailor its sound.
- Convolution Reverb with many impulse choices.

**** Additionally, there is a complete suite of 61 audio effect processors in total available via the AUX FX Sends in the mixer portion of HALion Sonic SE.***

THE MOTION SECTION



The Motion Section provides an 2 additional LFOs, 2 Step Modulators, User Envelope, Amp Envelope, and Pitch Envelope.

LFO A and LFO B are located in the upper left part of the section. The LFOs have a frequency rate or when set to sync will automatically lock to the tempo and also has amount, note division, shape and phase controls. The LFOs also have a destination pull down menu that gives you many options like Cutoff, Resonance, Distortion, etc.

The underneath the LFOs are the Step Modulators. The Step Modulators come equipped with a destination pull down (similar to the pull down used with both the LFOs and User Envelope), a Step parameter, Triplet toggle switch, Frequency Rate, Grid Snap, Sync Mode, Slope Mode and Slope Amount, Sync Mode, Polarity Switch, Reset, Step Forward and Step Backward buttons and Step Modulator Presets.

At the right of the section the user will find the Envelopes. There are three different kinds: User Envelope, Pitch Envelope and Amplitude Envelope. Both the User and Pitch Envelopes can be bypassed. The User Envelope remains on top while the user can switch between the Pitch and Amplitude Envelopes on bottom via 2 buttons labeled appropriately. Both the User and the Pitch Envelopes have an Amount knob, but only the User has a Destination pull down (pull down is similar to that of the LFO).

THE ARP SECTION

This is an advanced 32-step Arpeggiator based on Yamaha's legendary Motif Technology with extensive programming and modulation features. The Arpeggiator offers many parameters for programming phrases and altering tempo, groove and swing. Three additional controller lanes are available for quick and easy step modulation for oscillator and filter parameters.

The phrases of the arpeggiator can be recorded internally and exported to the DAW via drag and drop to make them accessible as editable MIDI events. Additionally, you can store and trigger 8 different phrases on the fly in real time without ever losing sync.

The entire Arpeggiator settings can be locked to keep phrases even when browsing the available presets.

The default HALion CC's for the C1, C2, & C3 bypass are CC110, CC11, & CC112. You will want to avoid those when assigning custom CCs to controls.

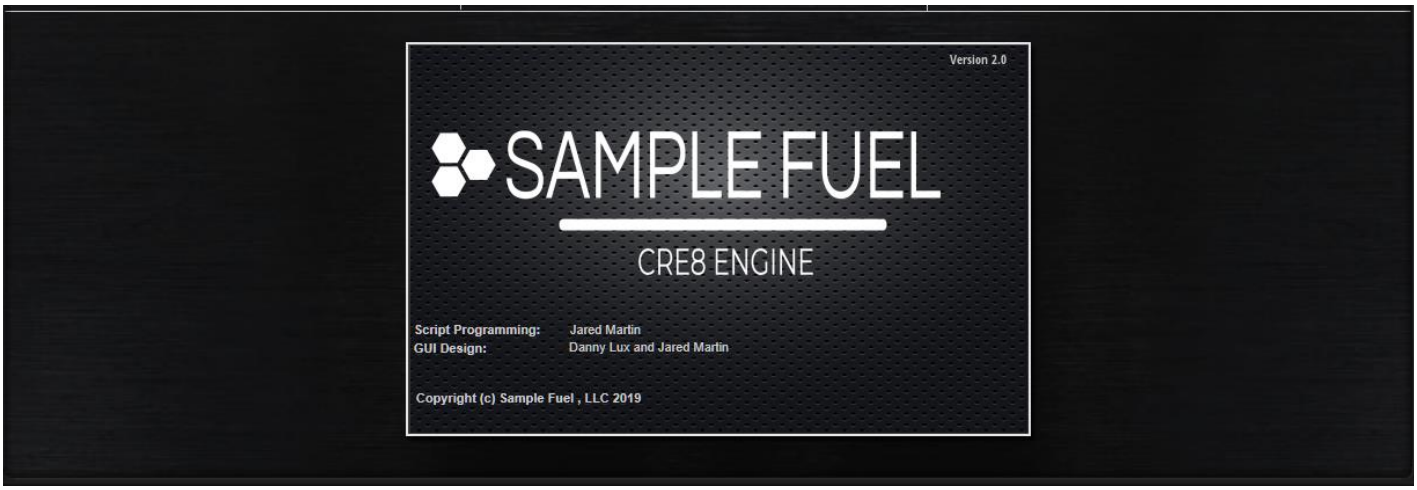
THE MIDI PLAYER SECTION

This is a simple midi file phrase player that you can drag and drop midi files to and from your DAW. Additionally, you can store and trigger 8 different phrases on the fly in real time without ever losing sync.

THE XY SECTION

The XY Section is a simple layout with 3 XY controller boxes. The first XY box controls the Main FX Filter when it is set to dual or quad Morphing modes. The second and third XY boxes are tied to the fixed Lo Pass and Hi Pass Filters that are found on the Master Section. This is a very fun and creative way to automate these filters.

THE ABOUT SECTION



This section includes links to the websites of Sample Fuel and Steinberg.

If you click on the SAMPLE FUEL logo in the middle of the page, you'll have the option to visit our page at, www.samplefuel.com .

If you click on the Steinberg logo on the bottom right, it will take you to Steinberg's home page, https://www.steinberg.net/.

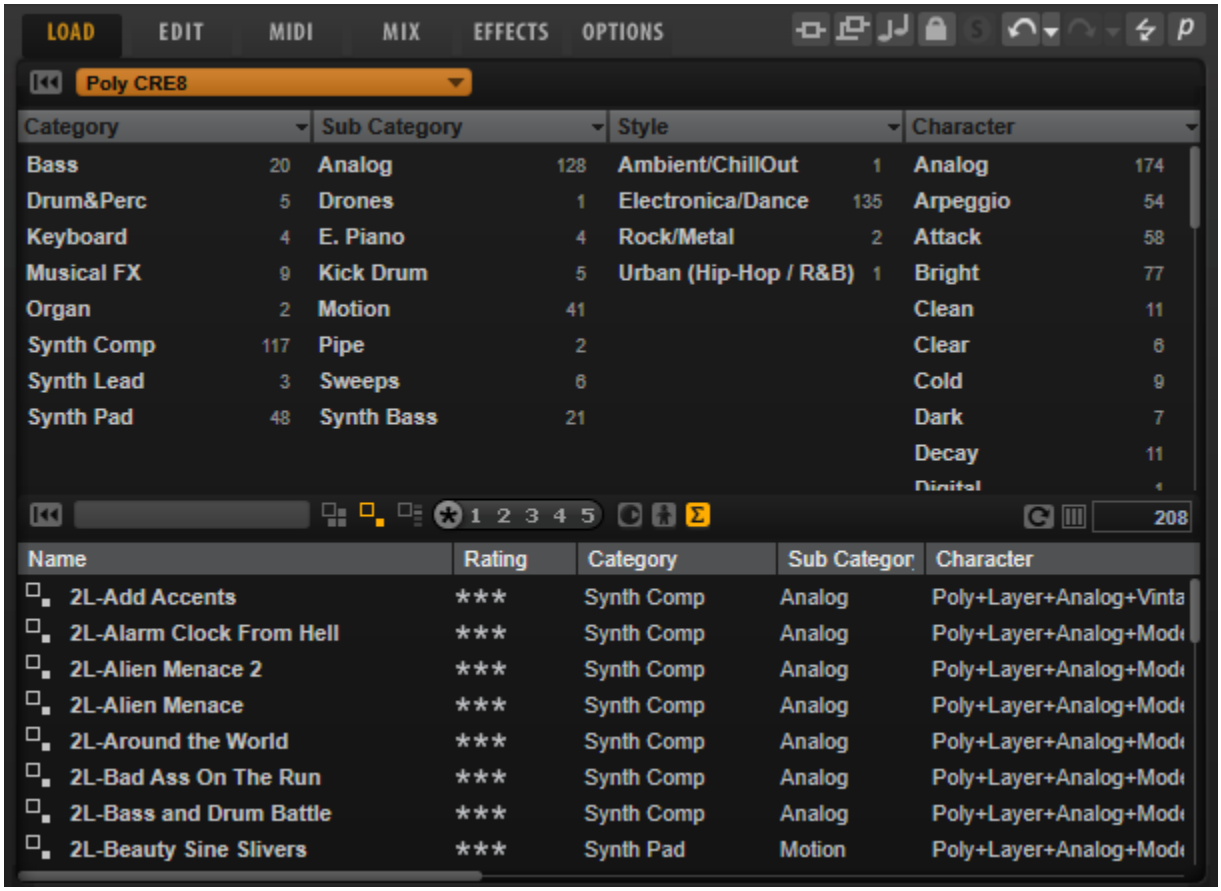
Factory Presets

POLY CRE8 includes hundreds factory presets to get you started!

Naming Scheme

1L/2L: Designates how many layers the preset contains

The Browser Tab



Browse through the patch library with ease and find what you need quickly thanks to the detailed tagging system and large viewing window that is part of the MediaBay sound management system.

The browser can also open "undocked" and be resized up to full screen size.

Videos:

- Installation
- Main Page
- Motion Page
- Motion Knob
- Synth Page
- Arp Page
- Midi Player Page
- Browser Page

More Videos on YouTube Channel

Manuals:

- Steinberg Help