

SAMPLE FUEL



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NEW FEATURES IN 2.0 UPDATE

- Complete redesign of the GUI.
 - Bigger and Improved look
 - Simple Page added for quick and easy use
- Over 1350 program presets included
- New User Envelope “LFO” shaped presets
- Over 1070 Wavetable options including:
 - Morphing Oscillators
 - These are waves that morph between various shapes giving the user many new sonic possibilities. To find these waves, navigate to the folder “Sample Fuel Morphing Oscillators” in the Wavetable Preset drop down menu. They have the prefix “Morph” in the name followed by the wave shapes it morphs between in order. To move between the wave shapes manually, just adjust the “Position” parameter. If you’d for it to morph automatically, you can assign the “Position” parameter as the destination in the Waveform Modulation Destination drop down. To see it in action, check out this [video](#).
 - To double down on this feature, you can also create what we call “Stacked Oscillators”. By turning on the “Multi” parameter and setting the “Num” to the specific number of different Oscillators included in the Wavetable, setting the “Spread” to 51 (or 49), and the “Position” to 50 you can play each oscillator simultaneously (*stacking* them). To see it in action, check out this [video](#).
 - Morphing Variations
 - Similar to the CM, XOR or PWM waveform type options you find in POLY, we’ve sampled waves from POLY and a few other synths that take a basic waveform shape and offer variations of that shape as you move the “Position” parameter. To see this in action, check out this [video](#).
 - Single Cycle from Classic Synthesizers
 - These are waveforms that are just single cycled. Many classic synths were sampled to achieve the various colors and waveforms. To use these wavetables, just navigate to the folder “Sample Fuel Single Cycle Waves” in the Wavetable Preset drop down menu. To see it in action, check out this [video](#).
 - Classic Oscillator Stacks from Vintage Synthesizers
 - Here we took the basic concept that we describe above in the Morphing and Stacked Oscillators, but have stacked different waveforms from different classic synths offering an extremely unique sound and color. To see it in action, check out this [video](#).
 - Virtual Synth Wavetables
 - Where as the Single Cycle Wavetables were intended to just capture the unique waveform sounds in other synths, these are Wavetables that were intended to capture the authenticity of various other popular classic synths’ patches. To see it in action, check out this [video](#).



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Introduction

WAVE is our second 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 links below to their respective manuals:

- [HALion Sonic SE](#)
- [HALion Sonic](#)
- [HALion](#)

Intuitive and flexible with the focus on quick and easy workflow is the concept behind our **CRE8** Engine. **WAVE** is a Modern dual oscillator Wavetable synthesizer powered by the **WAVE CRE8** Engine. 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 **WAVE 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 **WAVE 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, Wavetable 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 **WAVE CRE8**, the Sphere controls are pre-assigned to Hi Pass Filter Cutoff and Resonance for both layers.

Ö 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 **WAVE CRE8**, these 8 Trigger pads are assigned to the Arpeggiator'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.

Ö 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”.
- 3.



Macro Page Parameters

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

- [SIMPLE/ADVANCED](#)
 - [SIMPLE](#)
 - [ADVANCED](#)
 - [MASTER SECTION](#)
 - [SYNTH](#)
 - [FX](#)
 - [MOTION](#)
 - [ARP](#)
 - [MIDI PLAYER](#)
 - [XY](#)
 - [ABOUT](#)

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](#) Page.

SIMPLE/ADVANCED

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.

- Upper Section contains:
 - **SIMPLE/ADVANCED** Switches: These switch between the SIMPLE or ADVANCED views
 - **Layer Bypass**: This will Bypass the currently viewed layer.
 - **Layer Lo Pass Cutoff and Resonance**
 - **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 octave span used in the Arpeggiator
 - **Layer Hi Pass Cutoff and Resonance**
- Upper Middle Section:
 - **WAVETABLE 1 and 2 controls:**

- **Wavetable Selector:** a browser to select a number of wavetables
- **Bypass:** switches Wavetable state On or Off
- **Octave:** changes octave of oscillator
- **Course:** tunes the oscillator in cents
- **Level:** adjust the overall level of the Wavetable
- **Pan:** standard pan for each wavetable
- **Speed:** Dictates how slow or quick the wavetable plays back.
- **Position:** The position of the cursor in the wavetable
- **Direction:** Determines the direction the cursor moves in
- **Formant Bypass:** switches the formant state on or off
- **Formant:** Specify a certain value to shift the formants of the wavetable
- **Multi Bypass:** Enable this to add up to 8 oscillators to the Wavetable.
- **Num:** Specifies the number of oscillators to be played back when Multi is enabled.
- Lower Middle Section:
 - **Amplitude Envelope Controls:** Attack Offset, Decay Offset, Release Offset, Sustain Offset, Amplitude Velocity
 - **Filter Controls:** Cutoff, Filter Types, Resonance, 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**

To learn more specifics about any of these parameters you can consult the HALion Operation manual. Link found on the [Additional Resources Page](#).

ADVANCED PAGES



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, Arpeggiator and Midi Player, and filter controls via XY Pads.

MASTER SECTION



The Main 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, 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.

- **Rel:** (Release) When enabled, the playback of the wavetable when continue to loop until the note is released
- **Legato:** When Legato is enabled, the cursor will playback at its current position with each subsequent note that is played
- **Sync:** Syncs the playback of the wavetable to the tempo of your host application
- **Formant Bypass:** switches the formant state on or off
- **Formant:** Specify a certain value to shift the formants of the wavetable
- **Key Flw:** (Formant Key Follow) Formant frequency changes depending on which note is struck and the degree of the Key Follow parameter
- **Multi Bypass:** Enable this to add up to 8 oscillators to the Wavetable.
- **Num:** (Number) Specifies the number of oscillators to be played back when Multi is enabled.
- **Detune:** detunes the added oscillators added via the Num parameter
- **M Pan:** (Multi Pan) This is a stereo pan that controls the width of the Multi Oscillators
- **Spread:** Plays back the added oscillators at different positions of the wavetable.

Waveform Modulation Parameters:

- **Bypass:** switches the on-off state of the LFO
- **Preset Menu:** Navigate through factory presets or save and load your own
- **Waveform:** Choose between 8 different waveform types for the LFO
- **Retrig:** (Retrigger Mode) Controls when the LFO Restarts
- **Destination:** Select the destination to be modified by the LFO
- **Amount:** Specify how much the LFO will modify the destination
- **Rate:** (or Frequency) This is the speed of the LFO
- **Shape:** The shape of the waveform type of the LFO
- **Phase:** The initial phase of the waveform of the LFO

Sub Osc Parameters:

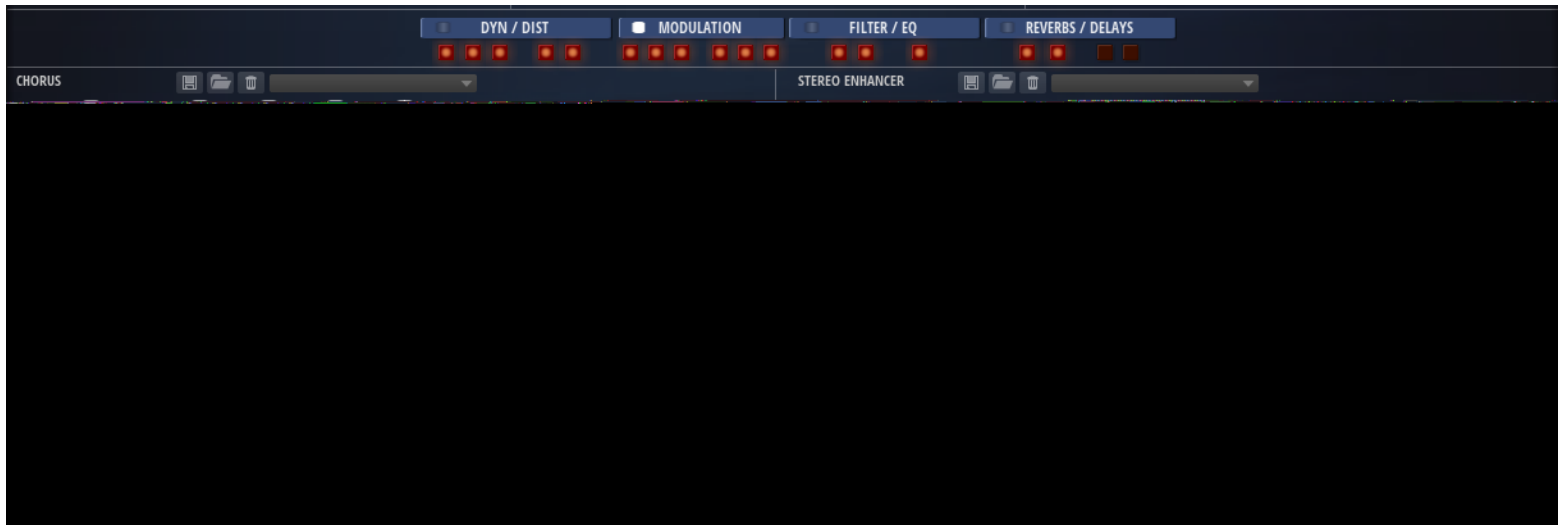
- **Bypass:** switches the on-off state of the Sub Oscillator
- **Sub Oscillator Waveform Type:** Choose between 6 different waveform types
- **Sub Lvl:** (Sub Level) The overall level of the Sub Oscillator
- **Sub Pan:** The pan specifically for the Sub Oscillator

Noise Osc Parameters:

- **Bypass:** Switches the on-off state of the Noise Oscillator
- **Wavetable Noises:** Choose between 201 different Noise Types
- **S:** (Sync): Sets the playback of the noise oscillator speed to sync with host app tempo
- **LP:** (Loop): Loops the playback of the noise sample
- **FP:** (Follow Pitch) Certain global parameters (Course, Fine, Octave) can affect the noise sample playback duration when this parameter is enabled
- **Nz Spd:** (Noise Speed) The playback speed of the noise sample
- **NZ KF:** (Noise Speed Key Follow) Modulates the speed playback by the MIDI note number
- **NZ ST:** (Noise Start) Specifies where the playback of the noise sample starts
- **NZ RND:** (Noise Random) Picks a random start in the playback of the noise sample
- **NZ LVL:** (Noise Level) The overall level of the Noise Oscillator
- **NZ Pan:** (Noise Pan) The pan specifically for the Noise Oscillator

*To learn more specifics about any of the parameters, you can consult the HALion Operation manual.
Link found on the [Additional Resources Page](#).*

The FX SECTION

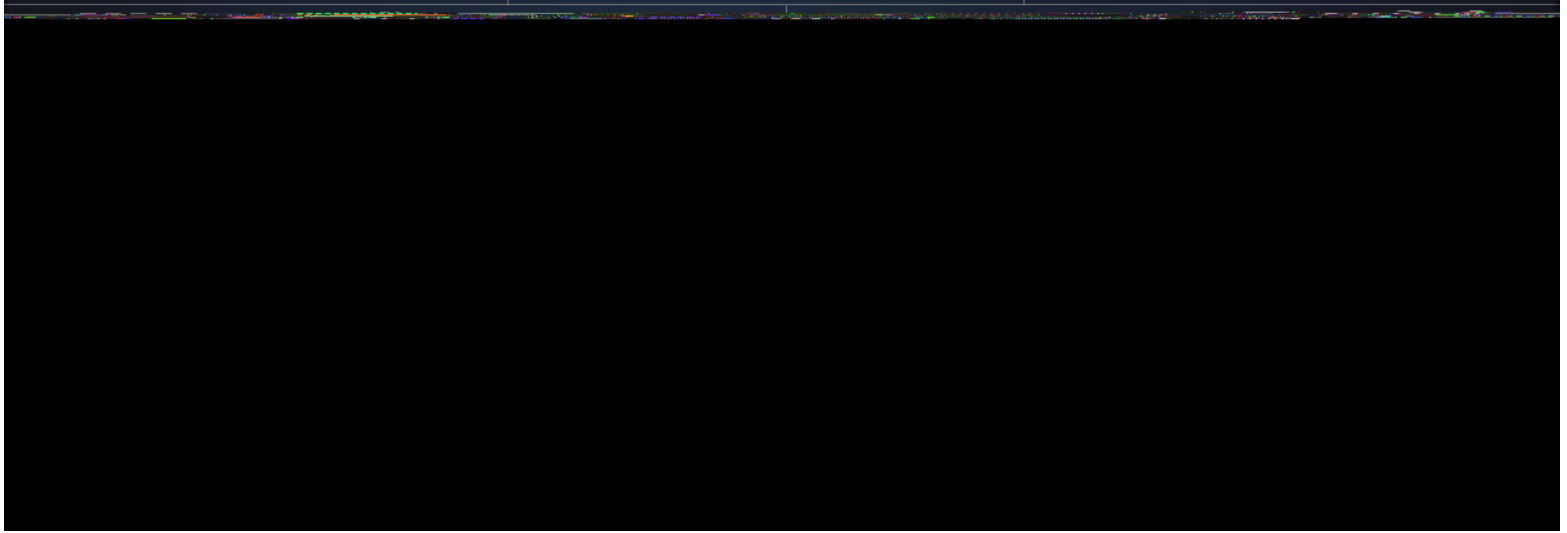


The FX Page provides you with 18 different insert effects to enable or disable. The different effects are:

- 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.*

MOTION SECTION



The Motion Page provides a 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.

To learn more specifics about any of the parameters, you can consult the HALion Operation manual. Link found on the [Additional Resources Page](#).

THE ABOUT SECTION



This page 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, www.steinberg.net/home



WAVE CRE8 includes hundreds of factory presets to get you started!

Naming Scheme

Prefix:

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

MORPHED: The preset is morphing between different waveforms in the Wavetable via the Waveform Modulation or the “Speed” Parameter

STACKED: Multi is on and multiple different waveforms are stacked on top of each other

Suffix:

Null- Motion knob turned to the left, resulting in no motion

Gate: Gate-like effect on the sound via the Step Modulators

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.



Additional Resources

Videos:

- [Installation](#)
- [SIMPLE Page \(demonstrated using POLY 2.0\)](#)
- [MAIN Section \(demonstrated using POLY 2.0\)](#)
- [FX Section \(demonstrated using POLY 2.0\)](#)
- [MOTION Section \(demonstrated using POLY 2.0\)](#)
- [Motion Knob \(demonstrated using POLY 2.0\)](#)
- [Wave Synth Page \(from update 1.5\)](#)
- [Arp Page \(from 1.5\)](#)
- [Midi Player Page \(from 1.5\)](#)
- [Browser Page](#)

More Videos on [YouTube Channel](#)

Manuals:

- HALion Sonic SE 3 [Manual](#)
- HALion Sonic [Manual](#)
- HALion 6 [Manual](#)