

HEX DRUM

USER GUIDE



OBLIVION SOUND LAB

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OVERVIEW

Hex Drum is a virtual instrument inspired by synth drum machines of the 1980s, in particular the Simmons SDS series with its distinctive hexagonal drum pads, from which our plugin takes its name.

Simmons drums were used on countless recordings during the 1980s across many genres, from disco, to reggae, to chart-topping pop hits. In recent years their distinctive sound has been given new life in synthwave and other '80s inspired genres.

For Hex Drum we took inspiration from the architecture of the SDS “drum brain” and made it more flexible by adding deep editing controls, and some unique twists of our own.

Hex Drum lets you easily dial in that classic vintage drum sound, but still feels right at home in a modern mix.

INSTALLATION

Visit the Hex Drum web page and download the latest installer for macOS or Windows. Unzip the file, launch the installer application and follow the setup instructions.

In addition to installing plugin files at the default locations for your system, Hex Drum uses the following directory to store presets and settings:

Windows

C:\ProgramData\Oblivion Sound Lab\Hex Drum

macOS

Macintosh HD/Library/Application Support/Oblivion Sound Lab/Hex Drum

To uninstall Hex Drum delete the plugin files and the Hex Drum directory.

REGISTRATION

Before purchasing a license for Hex Drum we recommend downloading the free demo version to ensure that the plugin works on your system.

To register your copy of Hex Drum click the cog icon at the top right of the plugin to open the settings dialog. Enter the serial number you received when you purchased the plugin and click "Register".

Until it is registered Hex Drum's output will be periodically muted.

INTERFACE



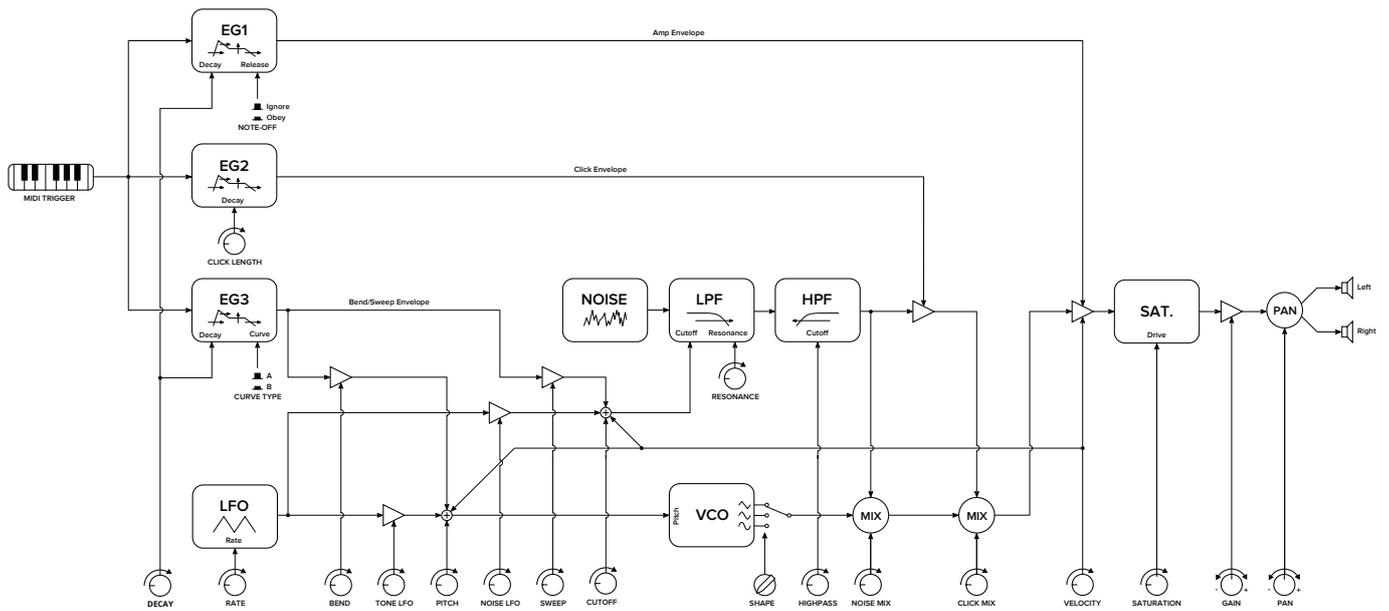
Hex Drum's graphical user interface (GUI) has been designed to put all of the plugins' controls within easy reach.

Control bar: A bar along at the top of the plugin includes menus for browsing and saving presets and modifying global settings. Clicking on the plugin name opens a popup menu containing links to this user guide and our website, and a control for resetting the GUI scale. The global bypass button will mute Hex Drum's output.

Voices: Hex Drum has seven separate drum voices. To switch between voices, click the name of the voice that you want to edit. This will reveal controls for editing TONE, NOISE, CLICK, LFO and OUTPUT parameters for the voice. Each of these controls is explained in detail later in this user guide.

GUI scaling: Hex Drum's GUI can be scaled up or down by dragging the handle in the plugin's lower right corner. Your chosen scale will be recalled the next time you use the plugin.

BLOCK DIAGRAM



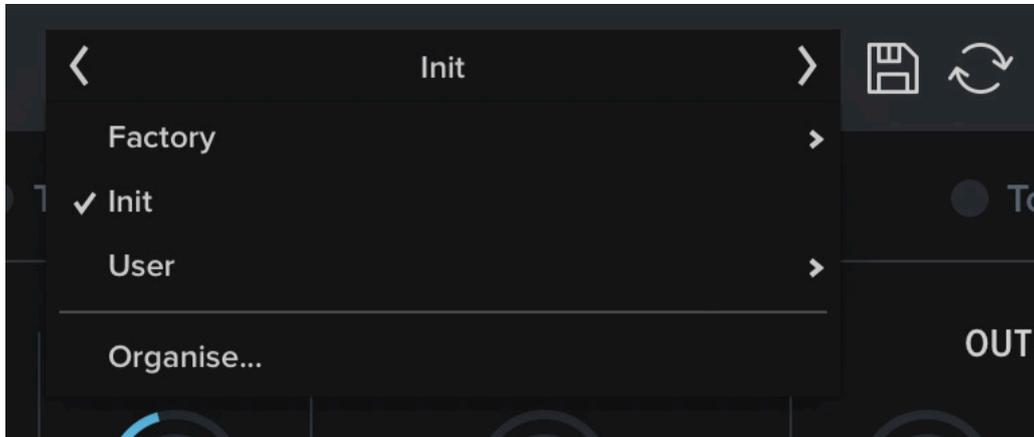
TOPOLOGY

- Amp envelope
- Bend/Sweep envelope
- Click envelope.
- Triangle oscillator, filtered output to produces sine and hybrid shapes.
- Triangle LFO
- White noise generator
- Lowpass ladder filter
- Highpass filter
- Saturator

The pitch-bent triangle oscillator output is mixed with filtered white noise. The output of the noise module is fed into a fast-decaying "click" envelope, which is mixed with the tone+noise signal. The signal is then saturated and panned.

PRESET MANAGEMENT

Clicking within the preset browser will open a menu that lets you browse the contents of the preset directory.



Clicking a preset's name in the menu will load it.

Clicking the arrows on either side of the preset browser will load the next or previous preset.

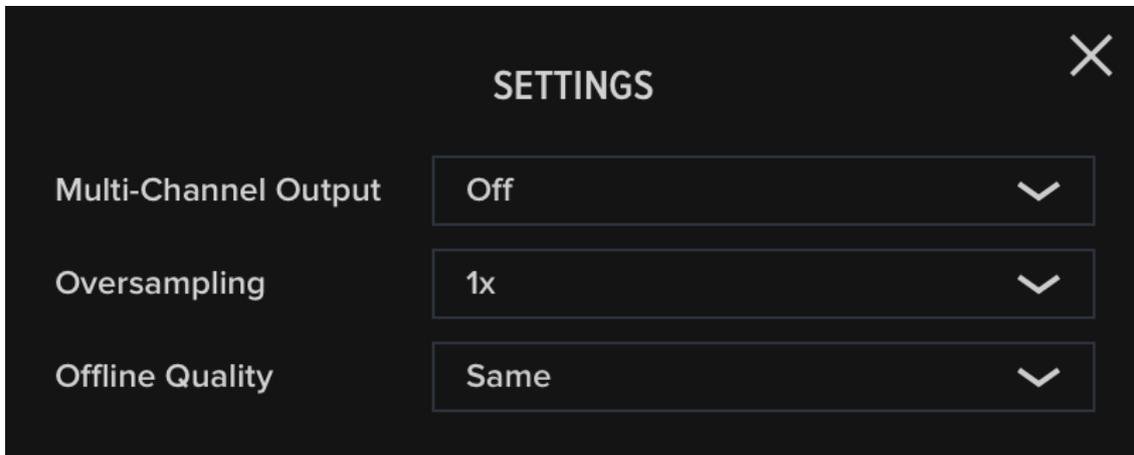
To save a preset, click the disk icon beside the preset browser. A dialog will open which lets you specify a name for your new preset, and choose which folder it should be saved in.

You can open the preset directory in Explorer/Finder by clicking "Organise..." in either the preset browser menu or save preset dialog. This is helpful if you need to delete presets, create new sub-directories for your presets, or reorganise the preset directory.

After reorganising your presets, click the refresh icon to rescan the presets directory.

SETTINGS

Hex Drum's settings menu can be accessed by clicking the cog icon at the top right of the plugin.



Multi-channel Output: When multi-channel output is enabled each drum voice will be sent to a separate audio bus. This allows you to route each voice to its own track in your Digital Audio Workstation, so that they can be processed separately. For example you might want to apply reverb only to a snare drum voice. View routing tutorials for major DAWs on our [YouTube channel](#) or refer to your DAW's manual for information about routing plugin output channels.

Note: Although Hex Drum only requires 8 stereo channels—one per voice plus mixed output—the AU plugin has a total of 16 for compatibility with Logic Pro X. When selecting the number of output channels in Logic, choose “16xStereo”.

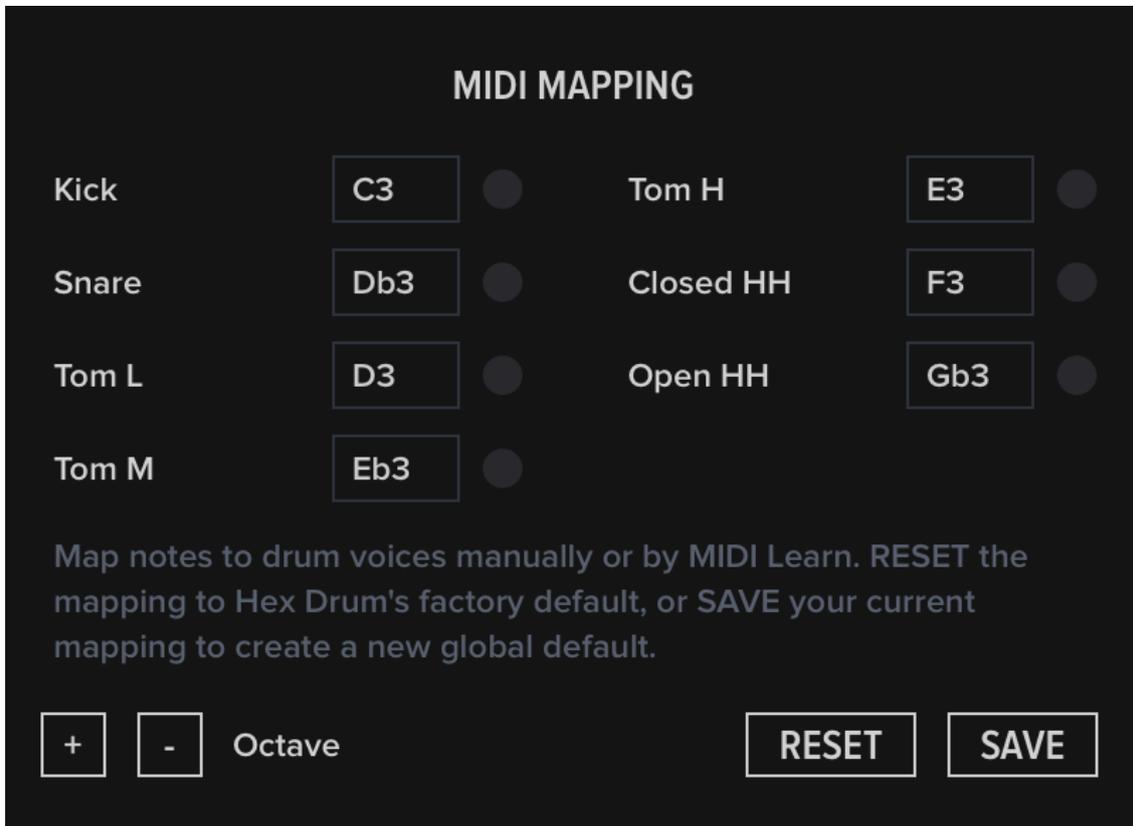
Oversampling: Choose how much the signal is oversampled by. Oversampling reduces aliasing artifacts which can occur when saturation or pitch modulation produce harmonics beyond the Nyquist limit. In most cases oversampling shouldn't be necessary, and the default is 1x (off), but Hex Drum supports oversampling up to 4x at the expense of CPU.

Offline Quality: Sets the quality at which audio is rendered in non-realtime mode. “Same” matches the chosen oversampling setting, while “Best” renders audio with maximum oversampling.

Note: Rendering your project at a high sample rate, or setting Offline Quality to “Best”, may reduce aliasing caused by an extreme LFO modulation, but as a consequence can also affect the timbre of your sound. In such cases we recommend leaving Oversampling and Offline Quality at their default settings, and rendering at your project's working sample rate.

MIDI MAPPING

Hex Drum's assigns one MIDI key to each voice. By default, the key range C1 to Gb1 (MIDI notes 36 to 42) is assigned to the seven voices, but you can create your own MIDI mapping from the Settings menu.



Note names can be entered manually or learned from a MIDI input device. To enable MIDI learn, click the LED button next to the voice that you want to re-assign. The LED will turn blue to indicate that it is enabled, and the next key that is triggered on your MIDI input device will be assigned to that voice.

When manually typing note names, both sharp (F#1) and flat (Gb1) notation are recognised.

Note: Manufacturers differ in how they label MIDI notes. For example note 36 is commonly designated "C1" on MIDI keyboards, but labelled "C2" in Reaper and "C3" in FL Studio. Hex Drum's labels may therefore not match what you see in your DAW or MIDI device, and you may need to play an octave or two higher to trigger sounds.

Octave Up/Down: Shifts the entire mapping up or down an octave.

Reset: Restores the default mapping values.

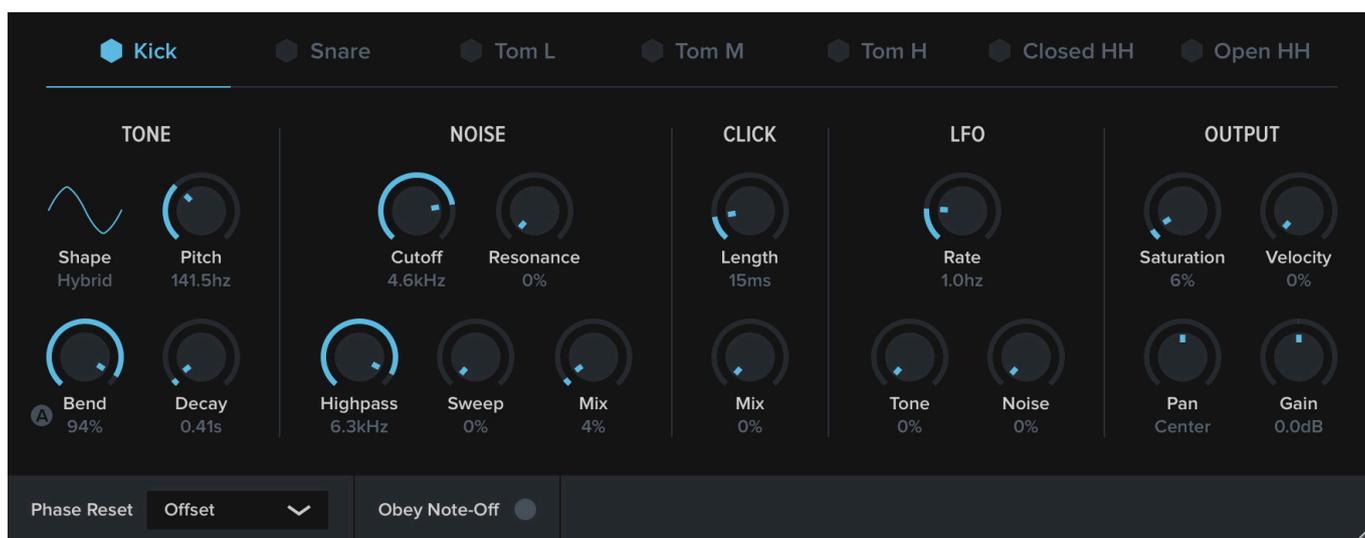
Save: Saves the current mapping as a global default. When loading a new instance of Hex Drum, the global default will be used if it exists.

MIDI CHANNELS AND MELODIC PLAYING

Hex Drum listens for MIDI events on MIDI channels 1 and 10+. This means that drum pads on MIDI keyboards, which typically transmit on channel 10, will work with Hex Drum.

In addition, Hex Drum's voices can be played melodically on MIDI channels 2 to 8, with Middle C (MIDI note 60) being tuned to the drum voice's natural pitch (this will be labelled "C3" on some keyboards, "C4" or "C5" on others). The standard tuning for Middle C is 261.62Hz.

VOICE CONTROLS



Tone Shape: Hex Drum’s oscillator generates a triangle waveform, which is asymmetrically saturated and filtered to produce three analog-sounding shapes: Triangle, Sine and a Hybrid triangle/sine. Click a waveform’s icon to switch between shapes.

Tone Pitch: Sets the pitch of the tone oscillator.

Tone Bend: How far the pitch will bend towards 0Hz as the voice decays. The toggle button next to the Bend knob switches between two curve shapes. Mode A is a standard analog-style exponential curve, while mode B has a steeper curve that is useful for producing snappier kick drum tones.

Tone Decay: The duration of the sound. Affects both the bend envelope and amp envelope.

Noise Cutoff: Controls the cutoff frequency of the noise generator’s lowpass filter.

Noise Resonance: Controls the lowpass filter’s resonance.

Noise Sweep: How far the lowpass filter’s cutoff frequency will bend towards 0Hz as the voice decays.

Noise Highpass: The cutoff frequency of the noise generator’s highpass filter.

Noise Mix: Controls the balance between the tone and noise.

Click Length: The duration of the white noise transient “click”.

Click Mix: Controls the balance between tone/noise and the click.

LFO Rate: Sets the frequency of the Low Frequency Oscillator.

LFO Tone: The amount that the LFO will modulate Tone Pitch.

LFO Noise: The amount that the LFO will modulate Noise Cutoff.

Output Saturation: How hard to drive the sound into saturation.

Output Velocity: How sensitive the voice is to MIDI velocity. At settings above zero the tone and noise will be darker at low velocities, and the voice output will be quieter. Velocity does not affect Tone Pitch in during melodic playing (see Midi Mapping).

Output Pan: Pans the output towards the left or right speaker.

Output Gain: Boosts or attenuates the output signal.

The controls at the bottom of the plugin interface affect all seven drum voices:

Phase Reset: Controls whether the tone oscillator's phase should be reset once the voice has decayed to silence. This gives you some control over the uniformity of the voice.

Off: The oscillator will be free running.

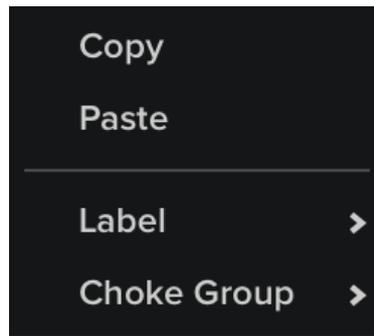
On: Phase will reset to zero.

Offset: Phase will reset part way through the oscillator cycle, producing a transient click that can add definition to low frequency drum patches.

Obey Note-Off: When this control is enabled the voice will fade out when a MIDI note-off event is detected. Otherwise the sound will continue to decay after the trigger key/pad is released.

CONTEXTUAL VOICE MENU

Right-clicking a voice's label will open a contextual menu.



Copy/Paste: Copy or paste settings from one drum voice to another. This makes it possible to copy a voice between two presets, or duplicate a voice to use as the template for a similar drum sound.

Label: Choose a label for the voice from a selection of common percussion types.

Choke Group: When a voice is triggered, voices that belong to the same choke group will receive a note-off event. For example triggering a closed high hat could choke the open high hat. Choke groups operate regardless of whether Obey Note-Off is active.

SUPPORT & CREDITS

INSTALL PATHS

Windows

VST3: C:\Program Files\Common Files\VST3\

Data: C:\ProgramData\Oblivion Sound Lab\Hex Drum

macOS

AU: Macintosh HD/Library/Audio/Plug-Ins/Components/

VST3: Macintosh HD/Library/Audio/Plug-Ins/VST3/

Data: Macintosh HD/Library/Application Support/Oblivion Sound Lab/Hex Drum

CREDITS

Coding, Design: Jonathan Nicol

Presets: James Bell, Bob Cirillo, Jeffrey Dery, Christian Hardless, George Lerma, Marcus "Da Fingaz" Manderson, Noah McGrath, Jonathan Nicol, Martijn S., Saif Sameer, Jason "ScarKord" Vine

Block diagram icons: Syntherjack

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