

[Back To The Home Page](#)

This "mirrored" page is published through the kind permission of MIX Magazine and PRIMEDIA Business Magazines & Media.

Visit MIX Magazine's WEB Site at: <http://www.mixonline.com>

[Mail A Link To This Page To A Friend!](#)

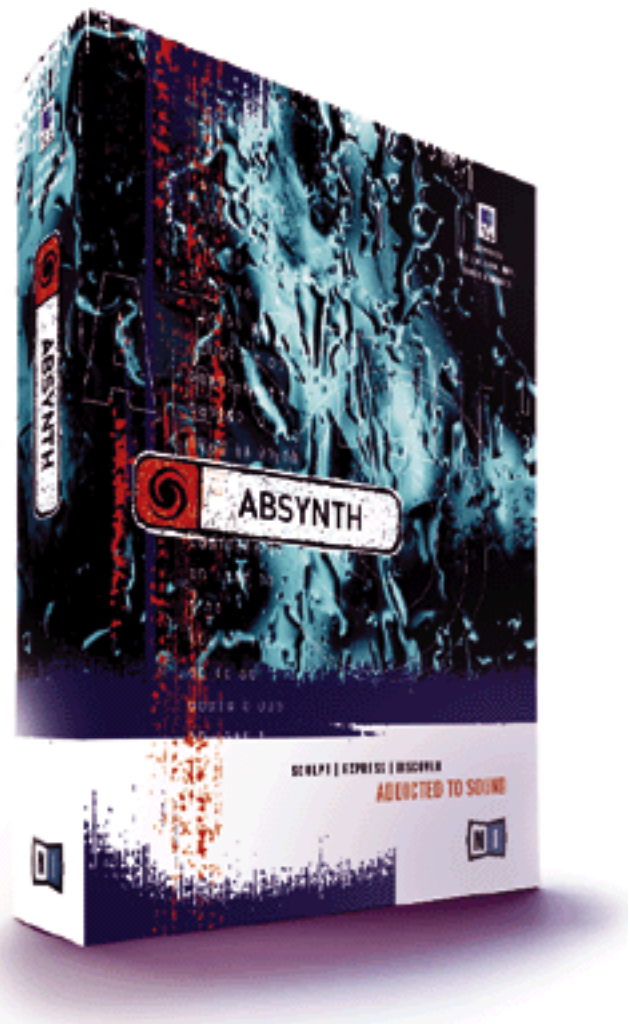
[Download](#) A Printer-Ready Copy Of This Review. You'll Need A [Free Acrobat PDF Viewer Plug-In](#) For Your Browser.

[Click On The Image Below To Return To The Mix Directory](#)

Native Instruments' Absynth exploits the vast potential of computer-based, virtually modeled analog synthesis. Synthesizer sound-generation techniques, such as subtractive, FM, AM, ring modulation and waveshaping, are easily combined in creative ways with Absynth's flexible patching system and clever architectural design. Absynth is designed for serious sound design, but anyone can start creating and building sound structures using the excellent and intuitive interface. A major feature of Absynth is that you'll hear all changes in real time, as you play a MIDI keyboard, without clicks or glitches.

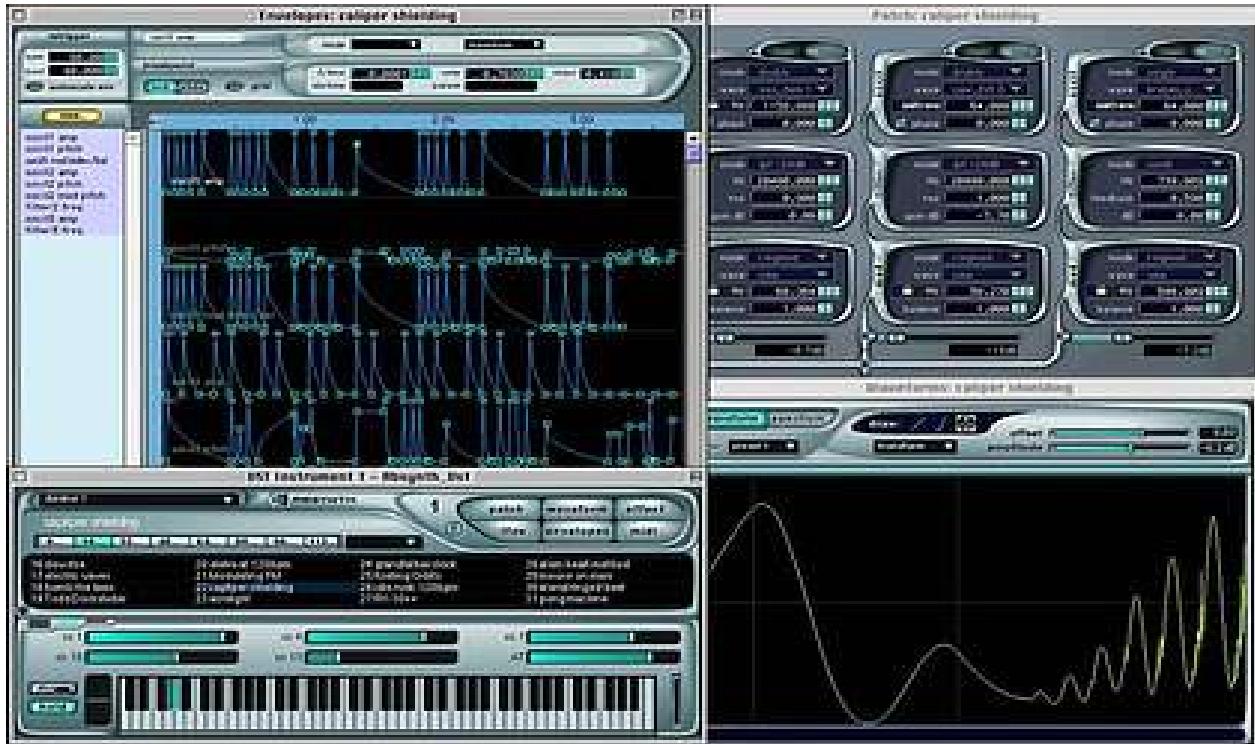
INSIDE ABSYNTH

Originally developed by Brian Clevinger and further developed by N.I., Absynth is efficiently written and runs as a stand-alone, or is multitimbral in VST 2.0-host programs with up to eight instances. Six oscillators, four filters, three ring modulators, a waveshaper section for distorting waveforms, and a delay effect section with three delay processes are available for each voice. Absynth comes with a huge collection of great patches you can copy and modify to taste. By using hundreds of oscillators, you can build huge rhythm ensembles and evolving ambient textures. Maximum polyphony is 64 and is only really limited by your CPU. I used a G4 500MHz with 640 MB of RAM (Absynth is currently Mac-only) and had no problems



running Pro Tools in the background for the stand-alone version and Emagic's Logic 4.7.3 for VST.

As a VST plug-in, Absynth does not rely on ASIO, MIDI or OMS; therefore, timing precision and resolution are better. Absynth, as a stand-alone, uses Digidesign's DirectConnect to stream audio into Pro Tools and other Digi DAE hosts; or, for working with Digital Performer, MAS and FreeMIDI are supported. As a stand-alone, only one Absynth will run at a time, but in the Record window you can stereo record, overdub and mix additional layers of synth sounds directly to the available RAM in your computer (with full undo). In stand-alone mode, CPU loading, an issue with all VST instruments, is not much of a concern.



THE MAIN WINDOW

Whether you use Absynth as a VST instrument or as a stand-alone, every sound begins with the Main window, where you'll find a virtual synthesizer with mousable keyboard and MIDI controller sliders, a bank of 128 presets with 16 listed and available at a glance, buttons to select any of six editing windows (which are repeated in an always present and draggable navigation toolbar), buttons to select MIDI channels, store and recall preset buttons, and a Reset/Pause button to stop sound and re-initialize internal DSP parameters when things get wacky.

THE PATCH WINDOW

The Patch window is where the 12 DSP modules that make up the synth's sound are displayed and interconnected by organic-looking glowing tissue or, as the well-written manual (translated into six languages) calls it, "plumbing." This other-worldly bionic interface schematically shows the signal flow between modules arranged into three independent channels. You can turn modules on or off within channels, or surgically remove and re-route

the connective arteries between them. The internal module routing for each of the three channels is consistent: Oscillator module connects to a filter module, which flows to a modulator module. Each module's settings are easily changed by mouse or by directly typing in values.

Each of the oscillator modules has two oscillators, Main and Mod. These are not sampled waveforms or actual oscillators but single-cycle wavetables. Waves used by the Main and Mod oscillators, as well as sources for any modulator, are selected from a list of 41 waveforms. Oscillator module modes include single (only Main is active), double (both oscillators mix), FM (Mod modulates Main) and Ring/Amplitude, where the frequencies of both oscillators are algebraically summed together to produce other tones.

WAVEFORM EDITOR

The Waveform Editor page is for editing factory-preset waves or redrawing any waveform used for Main oscillators, Mod oscillators, LFOs or wave-shaping modulation. You can create your own waveforms here or you can import and use the first 1,024 samples from any .AIFF sound file. Future versions of Absynth will allow users to create libraries of waveforms for use as both oscillator and LFO/modulation sources. This page is entered directly from a module's currently selected wave; with this version, you cannot copy waves from one preset to another. In addition to hand-redrawing by clicking and dragging the wave around, you can normalize gain, fractalize (a super-complex transform that creates bright, organic-sounding waves) and much more. Spectrum mode allows the first 64 harmonics of the wave to be displayed, so that both amplitude and phase of each harmonic number can be altered. Harmonics above the first 64 remain unchanged and will not chop off when the wave is resynthesized. Again, all of these changes are real time; I found this page to very educational as to why certain sounds are the way they are!

COMPLETING THE CHANNEL

After an Oscillator module is a Filter module with eight different filter types, most with resonance and feedback. You have three lowpass, two highpass, bandpass, band reject (notch) and comb. You can apply a separate filter to each voice (poly) or all voices together (mono).

The Mod module follows the Filter and has similar parameters as an Oscillator: wave, frequency mode and frequency. Ringmod mode is like ringmod in Oscillator, with the balance control adjusting input level vs. the modulated signal. This configuration, Oscillator/Filter/Mod, completes a single channel, and there are sliders built into the connecting plumbing to adjust the level of each channel that is going to the master channel for output. I liked the Auto-Balance Sliders feature, which automatically adjusts the 3-channel output levels proportionately: If you raise one channel's level, then the other channels automatically reduce in level so that the total mix is at full output level. (I wish someone would invent that feature on automated mixing consoles!)

MASTER CHANNEL

The Master channel is chained in this order: The Waveshaper module (distorts the wave) connects to the Filter module, which goes into the Effect Delay Matrix module. Waveshaper uses nonlinear distortion to affect the sound. Interestingly, you can allot a separate Waveshaper to each voice (again called poly), or use mono, where all voices merge and pass through a single waveshaper. There are controls for the timbre of distortion, level and phase. I found waveshaper to add very analog-like textures to any sound&processing I would do on most hardware synths.

Next in the Master channel is another Filter module, which is just like the filter following each oscillator. Absynth has a unique feature with three separate buttons on all modules for parameter settings: coarse, fine and extra-fine. This gets you around quickly and precisely with less overshoot, say from 0.01 Hz to 20 kHz.

The Effect Edit window, the final module in Master channel, is for editing the six delay lines. Effect has controls for delay times ranging from one sample to 740 ms, LFO modulation and MIDI controller, master feedback level and feedback lowpass filtering, master time control, gain and panning, invert and control sensitivity (input gain). Pipe, a multitap delay, uses waveguide-based physical modeling. This effect, like all of the effects, is stereo and produces some of the best flanging, pitch shifting and rotary speaker effects I've heard coming out of a computer.

ENVELOPE WINDOW

Each of the oscillators in Absynth has an envelope generator with breakpoint envelope generators with up to 68 breakpoints; Absynth stops using CPU resources as voices reach their last breakpoints. Again, you can click and drag, make new breakpoints and change the curve of a breakpoint's line segment (slope). You can copy envelopes from one voice to another, snap them to tempo grids, and loop and/or repeat sections of an envelope. However, there is no performance control over envelope times and no LFO sync to MIDI clock.

Absynth has three LFOs, all with sample-and-hold modes. The LFO Edit window has extensive control over LFO waveforms, phase, LFO pitch, depth, FM (where one LFO modulates another), sample-and-hold rate, and retrigger by a preset control value. The MIDI window is the main control and assignment window for all MIDI controllers: their note scaling, lag, or the amount of time it takes a parameter to respond to continuous controller data, velocity, program changes, pitch bend and depth.

ABSYNTH IN THE STUDIO

After copying a bank of patches into a new one for editing purposes, it was great fun to explore how sounds were created and then instantly see and hear how changing parameters and waves affected the patch. For synthesizer players, the big attraction to Absynth will be its great sounds and real-time operation: You can always hear your changes as you play along, just like working with any good, full-featured hardware synth. Any new synth, hardware or virtual, has to come with some great sounds to get you going, and Absynth shows up with

many very complex, useful soundscapes as well as rhythmic collages. (What's the actual reason why some synths become very popular and others don't? Great preset sounds!) There are more third-party soundware CDs on the way. The ultimate in advanced synthesis in a virtual instrument these days, Absynth sells for \$299 MSRP.

Distributed by Steinberg U.S., 21354 Nordhoff St., Suite 110, Chatsworth, CA 91311. Telephone 818-678-5100 or fax 818-678-5199. www.steinberg.net or www.native-instruments.com.

Barry Rudolph is an L.A.-based recording engineer. Visit his Web site at: WWW.BARRYRUDOLPH.COM



[Learn More And Buy It Now At Musician's Friend!](#)

[Click Here To Return To The Mix Directory](#)

This Review Is Copyright © 1995 Through By [PRIMEDIA Business Magazines & Media](#) All Rights Reserved.



[Back To Home Page](#)

[Back Up To The Top](#) 

[All Web Page Design Is Copyright © 1995 through By Barry Rudolph](#)