



by Craig Anderton

The software takes E-mu's sampling expertise into the virtual world, while the hardware provides serious I/O and effects — all at a price that looks like a typo.



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E-mu Systems Reviews Emulator X Studio

The hardware sampling experts go virtual

Type: Sampler/audio interface/software bundle

Price: \$599.99

Contact: E-mu Systems, www.emu.com

Platforms: Windows 2000 SP4/XP SP1

Minimum system requirements: 512 MB RAM, PCI 2.1 slot, adjacent PCI slot for sync daughterboard, 1.5GHz PIII or AMD processor, 1024 x 768 display

Analog I/O: six 1/4" TRS balanced ins, eight 1/4" TRS balanced outs (software selectable +4/-10), 2 combo mic/line ins with TFPro mic pres, stereo headphone out, RIAA equalized phono input, 4 stereo minijack alternate outs (these parallel the eight balanced outs; intended for driving powered speakers with surround applications)

Mic Preamp: +10 to +50dB gain, switchable +48 phantom power

Digital I/O: S/PDIF 2-in/2-out transformer-coupled coaxial, 2-in/3-out optical (software switchable AES/EBU, S/PDIF, or ADAT. In ADAT mode, offers 24 bits with 8 channels @ 44.1 or 48kHz, 4 channels @ 96kHz (S-MUX compatible), 2 channels @ 192kHz. FireWire 400Mbps port.

MIDI I/O: 2-in/2-out (32 channels)

Sync: internal crystal sync at 44.1, 48, 96, 192kHz, external sample rate sync (ADAT, S/PDIF, opt. or coax), word clock (75ohm switchable termination), SMPTE in/out, MTC out

A/D-D/A converters: 24-bit linear, 192kHz

Resolution: 16-/24-bit @ 44.1, 48, 96, 192kHz, 32-bit floating point internal processing

Modes of operation: standalone, VST plug-in

Bundled software: 4 CDs (over 2GB) of sounds, PatchMix DSP, hardware-accelerated FX library

Format support: EOS, Esi, Eill, Emax II, Giga, Akai S1000/3000/5000, HALion, EXS24, SoundFont 2.1, WAV

Drivers: ASIO, WDM (for interface only), DirectSound

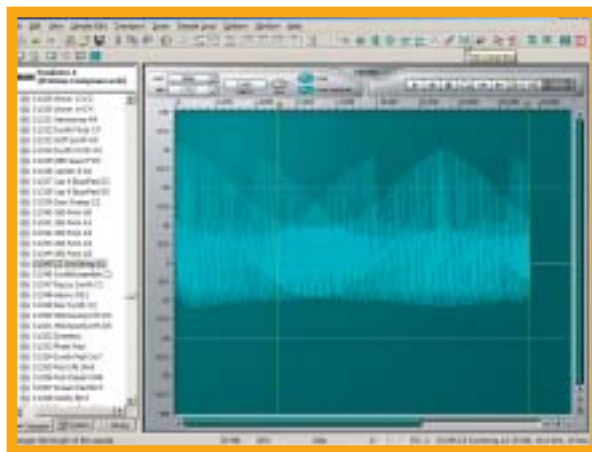
Copy protection: periodic CD insertion

There are a lot of native soft samplers, but the E-mu Systems Emulator X Studio package (EX for short) is a

hardware/software bundle: PCI card, sync and I/O daughtercard, nice I/O breakout box, sampler software, sampler format conversion software, and

hardware-accelerated effects. It actually samples — it's not just for playback — and works as a VST plug-in or in standalone mode. ➤

SAMPLE EDITING HAS EXTENSIVE OPTIONS, WITH PLENTY OF SCREEN SPACE TO SEE WHAT YOU'RE DOING. YOU CAN ZOOM IN UNTIL YOU SEE EACH INDIVIDUAL SAMPLE.



THE PATCHMIX DSP APPLICATION (LEFT) PROVIDES 32 CHANNELS OF ZERO-LATENCY HARDWARE MIXING/MONITORING, AND A VIRTUAL PATCH BAY WITH FX INSERTS. IN THE BACKGROUND IS THE EMULATOR X'S VOICE EDITING WINDOW, WITH ONE OF THE 54 FILTER TYPES ABOUT TO BE SELECTED.

E-mu Systems Emulator X Studio

Tying the software to hardware has significant strengths, like tight integration, zero-latency mixing, and hardware effects that don't tax your CPU (although the hardware doesn't have infinite DSP — you can run out of effects). This is the same high-quality hardware used in E-mu's 1820M, and features a ton of I/O.

On the downside, basing the hardware on FireWire connectivity would have been more transportable. (Although there is a FireWire port, it doesn't relate to the sampler — it's just a thoughtful bonus.) Still, PCI slots aren't going away any time soon, and the exceptional performance justifies tying into the computer's insides rather than going through external I/O.

INSTALLATION

The package installed easily and worked immediately. There are some unexpected extras: A headphone splitter, MIDI DIN to mini-DIN adapter for driving modules with non-standard MIDI connectors, and a power supply cable extender (the PCI card gets its power from the computer's power supply.) Everything you need to get going is included.

THE HARDWARE

The specs sidebar gives the specs, but it's worth mentioning that the breakout box is classy, with good build quality and connectors. E-mu gets extra points for including a phono preamp; DJs, rap, and hip-hop artists will appreciate this for sampling classic vinyl. Unless you need more I/O, this is as good an audio interface as you'll find in this price range . . . and probably some higher price ranges too. And of course, having a hardware interface means you can hook up a mic or line out and actually sample.

THE SAMPLING SOFTWARE

There are no real surprises regarding architecture. A browser tree locates presets and samples, and a large window offers different pages that show various aspects

Bottom line: It's
a helluva
package at
a helluva price.

of the sampler (voice editing, voices and zones, and links among presets). What is surprising is the interface's efficiency — everything is visible and easy to edit, without taking up too much space — and drag-and-drop is well supported. If you've worked with samplers before, it's a cinch to get around. The only reason you need to read the PDF manual (there's also a printed, fairly limited quick start manual for both the interface and sampler) is to pick up on the extra goodies that aren't obvious.

As this is an E-mu product, there's a major emphasis on filtering — 54 types, and you can morph from one filter to another. Under the hood, there's also the option for high-quality transposition if you're stretching samples over a wide range. E-mu has always had the recipe for transposing samples and making them sound good, and they've ported that over to the EX. There are also plenty of modulation options, along with flexible routing.

PATCHMIX DSP

This application ties into the hardware, providing zero-latency mixing and effects that don't load down the CPU. A large window shows effects parameters for editing, but you can also show inputs and outputs, and do patching. There are effects inserts per channel and master inserts; the number of each depends on how you're using the EX DSP resources.

But these aren't only for effects: Right-click on a slot and you can insert a trim control, peak meter, signal generator, or insert an additional send or send/return (yes, use an external in and out in the



As we go to press, E-mu has announced version 1.5 of the Emulator X software. This free download offers integrated software effects at the preset and multisetup level (these are in addition to the existing hardware-accelerated effects), auditioning of sounds straight from disk, and a new Single View Screen that allows users to quickly search and dial up sounds in seconds. For more information, visit E-mu's web site.

breakout box to insert some vintage piece of hardware sitting in your rack).


There's the usual stuff too, like meters, level controls, mute and solo, etc. PatchMix DSP isn't just an accessory, but a useful part of the system. And, with a recent driver update (version 1.60), the PatchMix DSP effects can show up in your VST host (named "E-mu Power FX"), with automation.

SOUNDS

There aren't a lot of dedicated EX libraries, but the supplied format translation program works quite well. The bundled sounds also rate highly, particularly the X-Producer CD. REX file import isn't supported, but if you have ReCycle and save the file in Akai format, EX can import it and map slices to the correct keys.

HEY, BUT WHAT ABOUT. . . .

We just can't cover everything. The file management deserves props, and the automated sampling functions are brilliant if you're into making your own samples. Then there's the sample editing DSP — time and pitch stretching, bit reduction, compression, and much more. And yes, there's positional, velocity, and controller crossfading for the various zones, which can be up to 128 layers deep. (Also note that if your budget is really cramped, the standard EX package that's based on the 1212M audio interface costs \$299.99; it omits the sync daughterboard and some I/O.)

Bottom line: It's a helluva package at a helluva price. E-mu has rocked the hardware sampling world for over 30 years, and their no-holds-barred entry into the virtual realm easily earns them an EQ Award. 

Strengths:

- Cost-effective
- Excellent quality (sound and hardware)
- Actually samples, not just playback
- Useful effects don't load the CPU
- Extensive editing options
- Disk streaming, or load in RAM
- Lots of realtime control options

Limitations:

- PCI-based system not as "transportable" as FireWire
- Wants a high-power system
- Windows-only
- Limited export options (EOS bank or EOS floppy bank files)