

**BIG BLUE** > A generous LCD shows the state of the transport and assignable buttons, MIDI channel, Group number, scene number, status of the automation functions and connection info, but it also pops up controller values when you move a control.



**BUSTING MOVES** > The Automation section includes a MIDI LFO and arpeggiator with several adjustable parameters each, and it also has a motion capture that can record the movements of as many as eight controls over the span of four measures.

## CME/WAVE IDEA BITSTREAM 3X

### TRICKED OUT KNOB FIDDLER'S TOOLBOX ARRIVES STATESIDE

BY MARKKUS ROVITO

Considering that Wave Idea first released its Bitstream 3X almost three years ago, it holds up amazingly well against the current MIDI control surface competition, thanks to its upgradability and nearly infinite programmability. While the hardware isn't brand new, the 3X just recently gained U.S. distribution through CME, as well as a new firmware update, making it a relative newcomer.

With the exception of drum pads, the 3X has just about every type of programmable MIDI controls a producer could want: 32 knobs, eight faders, eight buttons, a crossfader, a ribbon controller, transport controls and an x-y axis joystick. In addition, powerful internal programmability can be exploited via PC/Mac/Linux software connected by USB or via the hardware controls and a detailed backlit LCD.

#### INTERNAL AFFAIRS

At a solid 10 lb., the 3X is a bit weighty, but the steel construction instills confidence for taking it to gigs. It functions off of USB bus power or the included wall-wart AC adapter. Setting it up initially was a bit convoluted due to the spreading of information across the main manual (paper and PDF), the online support site and several PDF addendums on using the 3X with specific software apps. There are also separate software programs for configuring the 3X and for updating its firmware. CME would do well to streamline the setup to one comprehensive manual and one companion software app, especially because both elements are essential to using the 3X to its fullest.

Extensive programmability is a hallmark of the 3X, and after a certain amount of eye-crossing manual study, it all clicks, and operation seems second nature, making it worthwhile. The controller has two main modes: Standard, a preprogrammed mode with some customization meant for generic plug-and-play use; and User, a fully programmable mode. There are also specific preprogrammed modes for Reason, Logic and Mackie Control, to be used with Mackie Control-compatible programs such as Cubase and Ableton Live. Those specific program modes can be further refined from within the software's individual MIDI Learn modes.

The User mode is programmable entirely on the hardware or more quickly using the editor/librarian software, which includes presets for many software and hardware products. Unlike many MIDI controllers, the 3X doesn't neglect hardware. There are dozens of presets for hardware keyboards and modules. And with two MIDI Out ports, the ability to assign every control to a particular MIDI Out and nearly instant scrolling of MIDI channels on the hardware, the 3X is a hardware enthusiast's dream.

Besides a MIDI CC assignment, programmable controls can follow one of seven response curves, such as linear, inverse, logarithmic, random and user programmable. The 3X also includes 21 Groups, which are essentially different sets of MIDI assignments for every controller. So by easily scrolling through the Groups with either the rotary encoder or arrow buttons, you can access as many as 21 assignments for each control (although the total number of discrete MIDI notes or CCs can't exceed the 128 allowed by MIDI). There are also 100 "snapshot" scenes that can save the position values of all the controllers. The scenes are stored in nonvolatile hardware memory. When recalling one of these

#### CME/WAVE IDEA

**BITSTREAM 3X** > \$499.99

**Pros:** Solid construction. Excellent array of controllers. Nearly infinite programmability. 21 Groups for assigning multiple parameters per control. 100 nonvolatile scene memories. Powerful built-in MIDI LFO, arpeggiator and automation recording. Clear, descriptive backlit display. Untold potential stemming from a deep operating system and a hardware expansion port. Includes a travel-ready carrying case.

**Cons:** Convoluted setup procedure. Room to grow with its template implementation.

**Contact:** [www.cme-pro.com](http://www.cme-pro.com)

#### SYSTEM REQUIREMENTS

**Mac:** 64 MB RAM; OS X

**PC:** 64 MB RAM; Windows XP SP2/Vista (Linux also supported)

scenes, the controllers will either jump immediately to the value a control is moved to (Jump mode) or in the default Hook mode, the value changes when the control crosses the previous position. In Hook mode, an arrow on the display shows which way the controller needs to go to change the parameter.

The Groups and scene memories are a huge plus for the producer or performer who needs to wring the maximum amount of control from a single unit. But the 3X adds one other standout feature set: an Automation section that includes a built-in MIDI LFO, arpeggiator and motion sampler. Perhaps more than any other 3X feature, the automations require some study and trial and error to get them to work with your particular application, but they are very powerful additions. The LFO and arpeggiator can effect incoming MIDI notes, and you have control over parameters such as LFO waveshape, frequency and amplitude, and arpeggiator melody, accent, gate and range via the Automation section of three knobs and three buttons. The motion sampler can record eight control automation curves for as long as four measures each and store the results in nonvolatile memory.

#### STREAMING MEDIA

When testing the various preprogrammed modes—including the Reason mode, the Mackie Control mode with Ableton Live 6 and the Standard mode with various stand-alone soft synths, I invariably preferred in the end to program my own templates in User mode. Results varied in Standard mode, because for the parameters that weren't preassigned, I had to compare the MIDI CCs that the 3X



**MYSTERY MACHINE >** The Expansion Port could host breakout controller boxes if Wave Idea decides to make them.


controllers were sending with the CCs the software was looking for, or those parameters that were preassigned may have mapped out in a way that wasn't intuitive.

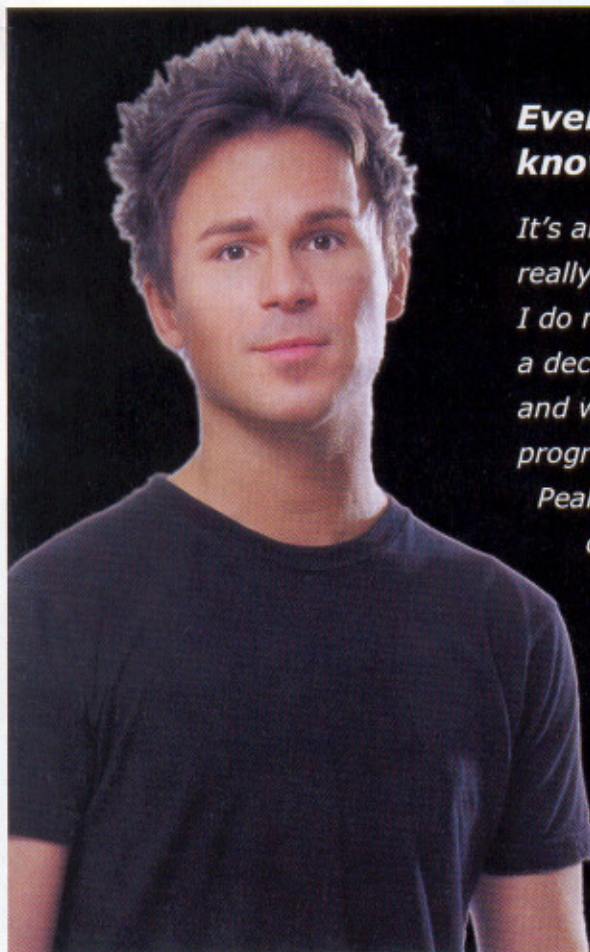
Reason mode was fairly successful. To control a Reason device, it has to have a sequencer track assigned for incoming MIDI. Typical mappings in Reason included synths with amp envelopes for Osc A and Osc B going to the faders, the crossfader controlling device level, buttons turning on and off sections such as LFOs and filters and much more. Changing the Group number with the 3X rotary encoder scrolled up and down the devices in the Reason sequencer tracks. While this mode was usable, I always wanted to customize it, and (at no fault to the 3X) the Reason Remote Override Edit Mode (MIDI Learn) is in need of some modernization.

Mackie Control mode with Ableton Live 6 resulted in a decent starting point for controlling the program, but this mode can be further modified with your own assignments. In Live 6—as well as any other program with an efficient MIDI Learn function—it was relatively painless and ultimately very satisfying to build a custom template for what I wanted to do. This is where the 3X's Groups came in extremely handy because, for instance, I could assign buttons 1 through 8 to control track mutes in Group 1, track solos in Group 2, record enabling in Group 3 and

scene launching in Group 4. Likewise the eight faders can extend out to control the levels of however many tracks you need using the Groups. The 3X joystick was also perfect for controlling the x-y axis that shows up in most of Live's built-in effect plug-ins (or as another example, the pitch bend/modulation combination in a soft synth).

#### CONTROLLING INTERESTS

The only significant knock on the 3X is that it is not as immediate as some of the other high-end MIDI controllers available, particularly the Novation SL ReMote line with its Automap Universal feature. However, the 3X's deep programmability and unique automation features are its strengths. By investing some time, the 3X could easily become an indispensable set-it-and-forget-it controller for the studio or the go-to roadworthy MIDI interface for demanding live sets. When custom programmed, it's a top-notch controller already, and it has a ton of potential for future firmware upgrades to advance its template implementation. There's even an expansion port that could accommodate future controller add-on boxes if Wave Idea chooses to make them, and a Sync-24 port that can sync vintage Roland gear such as a TB-303 or TR-808 to MIDI setups. It's about time that this piece enjoyed greater availability. 

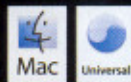


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