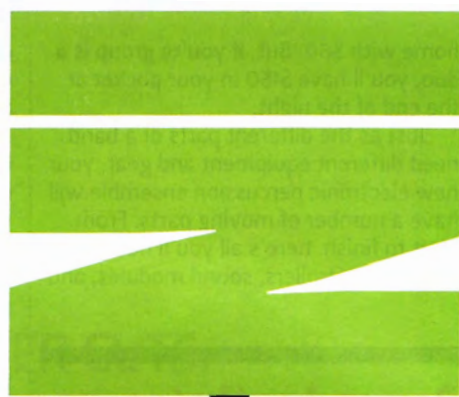


# PLUGGED



## CREATE YOUR OWN ELECTRONIC PERCUSSION DUO

**Here Kitty Kitty:**  
The trapKAT XL offers 18 assignable pads



By Norman Weinberg

For more than 12 years, CrossTalk, the Electronic Percussion Group at the University Of Arizona, has been creating music that is performed entirely on electronic percussion controllers. The group doesn't try to emulate traditional percussion ensemble music. Nor does it play "world music" styles using electronic instruments. Instead, it performs new music in new ways that expand the experiences of the students and the audiences that hear them. Perhaps it's now time for the

general drumming community — outside the hallowed walls of educational institutions — to take the plunge and create their own groups for fun, profit, and creative expression.

It's no secret that the economy is in bad shape. Every business owner is trying to shave off expenses in an effort to add more dollars to the bottom line. And if you're a musician, then you're also your own business. While some performance venues, notably clubs and small halls, have totally gone under, others

# THERE CAN BE ONLY TWO

have simply cut back on their live music offerings — fewer nights and/or shorter hours — or have started to pay their musicians less for the same amount of work.

Necessity is the mother of invention, and this could be the perfect time to reinvent yourself to create and develop

totally unique performance opportunities. Think about forming your own electronic duo that could deliver all the sound, power, and excitement of a larger group. The basic math is really simple: If you're currently playing in a five-piece group and the gig pays \$300, you each go

# PLUGGED IN **Create Your Own Electronic Percussion Duo**

home with \$60. But, if your group is a duo, you'll have \$150 in your pocket at the end of the night.

Just as the different parts of a band need different equipment and gear, your new electronic percussion ensemble will have a number of moving parts. From start to finish, here's all you'll need: players, controllers, sound modules, and

## Remember that each type of controller is going to be somewhat better suited than others for a particular function

sound reinforcement, not to mention a little knowledge going in.

This article will help you to answer some of the questions you might have and help you make some decisions that could turn this dream idea into a reality.

### Picking Partners

While all musicians are different, and it's often a mistake to generalize, drummers seem to work well with other drummers. Drummers don't have the same type of ego issues as guitar players, and they're more reliable than bass players (but don't tell them). With today's technology, a duo (or trio) of percussionists can produce just about any type of sound and any style of music that the market might demand. And, the creative collaborations that are possible with a smaller group of artists can often make the difference between forward progress and stagnation.

When you're trying to find a partner for this project, look for a musician with versatility and an open mind for experimentation. Someone who can play with sticks, with their hands, and with keyboard-based instruments is going to provide a boatload of possibilities for creative interaction. With just a

or two, an electronic percussion duo could easily play clubs, concert halls, and private or corporate events.

Don't worry if you or your partner isn't a computer genius. With the quality of sounds available out there, and software's recent emphasis on "ease-of-use," it's actually more important that you're both not afraid to jump into a project to explore new sounds and new modes of musical expression. Finding a strong mallet player who can play some keyboards or a mallet controller will provide opportunities for expanded solo sections without a great deal of preliminary programming. And believe me, most vibraphone and marimba players are on the lookout for new performance and money-making opportunities.

### Picking Controllers

One of your first decisions is going to be what types of percussion controllers you're going to be playing. Are you interested in being more traditional (if you can even be "more traditional" with an electronic percussion duo) or more avant-garde? A traditional duo might include nothing more exotic than two electronic drum sets. A non-traditional duo could be as forward-looking as one player performing with a Buchla Lightning while the other is firing loops and one-shots from a Novation Launchpad controlling Ableton Live software.

The hardware you choose will depend on a number of factors. If you



**Give me some skin:** The Korg Wavedrum might be the perfect choice for playing with your hands

or your duo partner is a strong mallet player (vibraphone or marimba), you may want to include a malletKAT, Xylosynth, or perhaps even an amplified or MIDI'd version of the acoustic instrument. An electronic kit or a multipad is almost a requirement. The physical movements and characteristics of banging away with sticks brings energy, excitement, and familiarity to an electronic performance. While an electronic kit may not be as sophisticated as some of the multipad alternate controllers on the market, they can be plenty powerful. And, as soon as you output the MIDI messages to a hot computer program, the entire world of sounds is at your disposal.

Some of the newer alternate controllers can be a godsend for controlling sounds and creating MIDI messages from physical actions. They can also make a big contribution to the "wow" factor for the audience. While it may be pretty commonplace for drummers to see a trapKAT, ZenDrum, or Trigger Finger, they are still unknown to the vast majority of laymen for whom you'll be playing. Some of the newer controllers that you may want to consider are the previously mentioned LaunchPad by Novation and the Akai Professional APC40 — both designed for controlling Ableton Live. The newly released, second generation of Korg's Wavedrum could be the perfect controller for playing with your hands.

Remember that each type of controller is going to be somewhat better suited than others for a particular function. For



**Connect Four:** The Novation LaunchPad is designed to work with Ableton Live

play a repetitive bass line, just about anything from an electronic kit to an ancient Octopad could easily do the trick. However, if you're counting on playing long tonal soundscapes while you control filter, stereo panning, delay values, and waveform shapes in real time, you're going to need something with buttons and knobs.

### Picking Sound Modules

If your controllers include self-contained sound sources, such as an electronic kit, or something like the Roland HandSonic, you'll be in good shape as long as your sonic requirements don't go beyond what the factory has given you. If you're planning to fire sounds through MIDI, create and play loops, or "roll your own" sonic environments, you'll need to move beyond the box to external sound modules.

The marriage between controller and sound source really can't be underestimated. It's vitally important that you consider what types of MIDI messages you're going to be able to send with your controller and match those messages to what the software will let you control. You'll notice that I'm speaking in terms of software programs rather than hardware sound modules. There's a reason for this.

It's arguable that hardware-based sound modules are perhaps more stable than software, and maybe that's true, as a hardware-based sound module is a closed system. That old E-Mu Proteus doesn't do email, doesn't run spreadsheets, won't let you access third-party plugins, or watch YouTube videos. Since the manufacturer controls all aspects of how the machine works and how it deals with the outside world, it's less likely to crash.

However, software is less expensive, more versatile, and more expandable than hardware. In CrossTalk, we started out using four samplers, which then eventually grew to 15 different sound modules. Setup and teardown was a nightmare, and routing both MIDI messages and audio signals created more problems than I care to remember. In 2006 CrossTalk moved totally to software. We've never looked back and we couldn't be happier.

At first, Tascam's GigaStudio program was our engine of choice. GS sounds great, has a large selection of software packages, and is easy to understand in terms of user interface.

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Later, the group moved to Kontakt and most recently switched to Reason 4.0. Yes, Reason isn't the hippest most esoteric audio software on the market, but it sounds pretty darn good. In addition, there are literally thousands of sounds produced for Reason that programmers give away free on the Internet. As an added bonus, it's easy to create your own sounds from scratch. We've found that we can do just about anything we need to in Reason's environment in terms of sounds and sound manipulation. However, the number one advantage we've seen by moving to Reason is that it doesn't crash. This last feature, not crashing, is the single most important consideration of any software program you plan to use in a

live musical performance. At a live gig, a computer freeze brings the entire show to a grinding halt. Not much fun for you and a total bummer for the audience.

I strongly suggest you get a computer that you devote exclusively to running sounds for your group. Keep the system software clean and basic, keep the hard drive optimized, and keep the "crap" off your machine, and you'll rarely have issues.

Going with software could also mean you'll be able to bypass a physical mixing console. There are a number of software programs on the market that include virtual mixers that can control a number of aspects of your sound. In addition, programs such as Reason or Kontakt can read four independent



**Four on the floor:** A four-in/four-out MIDI interface such as the M-Audio Midisport 4x4 is fast, cheap, rugged, and small

MIDI controllers. This means you'll be able to use up to four different controllers on a single computer system. How easy would that setup be?

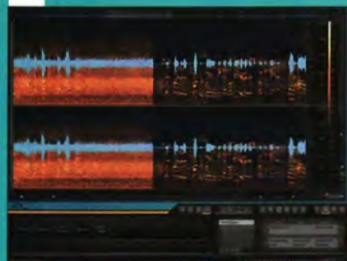
By running software on your computer rather than

using hardware, you're going to need a MIDI interface along with an audio interface. I know that there are hundreds of choices out in the marketplace, but I'm going to save you a lot of time and money. Get a four-in/four-out MIDI interface such as the MOTU Micro Lite or the M-Audio Midisport 4x4. They're fast, cheap, rugged, and small, and run off USB power, so you won't need to deal with an extra power cable. Even if you're going to start with a single percussion controller, a four-input interface will let your performance rig grow.

In terms of an audio interface, you could go the cheap-and-easy way of using the sound engine built into your computer. But this isn't really recommended. The audio quality is going to suffer, and you'll be putting extra stress on the computer's processors. Instead, go with a small and clean-sounding audio interface such as the M-Audio Profire 610 Firewire or the MOTU UltraLite-mk3. These units provide very clean, high-quality sound with plenty of audio outputs. They are also solid, cheap, and bus-powered. What more could you ask for?

## STUDIO SECRETS

By Jake Wood



### Squeaky Clean

Within the severe tension of studio work sometimes even the most foolproof precautions for pristine audio are fallible. A cellphone ring can bleed into a vocal take; a guitar amp won't stop humming; or there's a fire truck around the corner just waiting for the tape to roll. When unintentional sounds infect a track, it's time to get a prescription for iZotope RX.

While there are a few marginal methods for removing unwanted audio, including parametric EQs and filters, nothing works quite as well as the spectrogram-based software iZotope RX. Spectrograms display a graphic representation

of frequency and intensity and iZotope utilizes that platform by allowing users to select areas of the read-out and alter them.

The primary hurdle to manipulating a spectrogram effectively is learning how to read it accurately. Surprisingly, the Rorschach-esque code of seemingly incoherent colors is not that hard to crack. With the Y-axis representing frequencies (bottom is low Hz, top is high Hz), and the color and brightness representing amplitude (the brighter a color, the stronger a signal), the best way to get comfortable reading a spectrogram is by uploading familiar songs, deleting various visual patterns, and auditioning the carnage.

The main function of iZotope is eliminating unwanted audio. Simply find the visual representation of the culprit, select it, and delete it, or go to the Spectral Restoration module and fill in the void with similar surrounding audio.

For nasty electrical hum, it's important to find the fundamental frequency as electrical hum emits a series of overtones (represented as horizontal streaks) that the included Hum Removal module is

tailored to battle. Drag the cursor over the lowest streak, make note of the frequency, and set the lowest notch filter accordingly.

Is it always necessary to have spotless audio? Absolutely not! Sometimes unintentional sonic vandalism adds irreplaceable ambience. For instance, John Bonham's squeaky pedal on "Since I've Been Loving You" has a charming "je ne sais quoi" that would stop even Mr. Clean dead in his tracks. To witness the true power of iZotope, check out these mp3s, in the second of which the legendary rusty pedal has been sacrilegiously removed:

[drummagazine.com/downloads/dirty.mp3](http://drummagazine.com/downloads/dirty.mp3)

[drummagazine.com/downloads/clean.mp3](http://drummagazine.com/downloads/clean.mp3)

Other uses include using the spectrogram like an EQ: If one area of bandwidth seems slightly annoying, soften it or erase it all together. Attenuate barreling low end from a floor tom, soften spitting sibilance from Sylvester The Cat, and eliminate 60 cycles of everybody's favorite hum.

### Sound Systems

I suggest you keep everything as simple as possible, but

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largest of halls, you're going to need to carry your own sound system. Even if a club has a built-in rig, it'll likely be designed to handle vocals rather than musical instruments. There are two ways to go that work perfectly well and both use powered speakers rather than passive ones.

One choice is to use powered keyboard amps. Models like the Roland KC series (the 350 and the 550), the Hartke KM series (the 100 or 200), and the Peavey KB series (the 3 or the 5) are all good choices. They're relatively light, provide plenty of sound, and can be purchased at most major music stores. The biggest advantage of this type of amp is that it is designed to handle the frequency response and tonal characteristics of synths that produce the full range of audio frequencies from tight and deep basses to airy leads. These amps are often pretty sophisticated with a number of individual inputs, line outputs, straightforward EQ adjustments, and headphone outputs.

The other route would be to use a powered P.A. system. Units from Mackie, QSC, JBL, and Yamaha are solid performers with good reputations for price/performance. While they might not be as versatile as some of the full-featured keyboard amps, they are often a little less expensive and come with a wider selection of models and varieties than keyboard amps.

Whichever direction you decide upon, your sound-reinforcement system will be simple, relatively easy to set up and break down, and give you enough flexibility to work in most venues.

## Hints And Ideas

Once you have all the hardware and software up and running, all you'll need is some music to play. Many of the musical styles that are popular today are based on playing loops. If you use Reason as your performance software, you have a complete composing environment right at your fingertips. Other software for loop-based music includes GarageBand, FL Studio, and Acid. There are enough loops floating around to keep you in music for the next 100 years! Working with loops is fun and easy, and while some may have strong feelings about working with other peoples' creative loops, others feel that, hey, it's more creative than playing covers. But, if you've got a problem with that, you're a drum-

Even if you decide to go with a loop-based musical style, you may not be able to cover all the parts you want to play in real time. It's common practice now for even the largest acts to use prerecorded tracks in their shows. Sometimes these tracks cover a few of the sounds that are contained on a recording that might be too difficult to reproduce in the real-time world of the live concert. In other situations the prerecorded tracks include the entire band, even the lead singers (I'm

**Using sequencing software you can easily create backing tracks and control them through the start and stop messages with your MIDI controller**

looking in your general direction, Ms. Spears). Using sequencing software such as Reason, Live, Logic, Digital Performer, and others, you can easily create backing tracks and control them through the start and stop messages with your MIDI controller. As long as you can hear the additional tracks, staying in sync shouldn't be too difficult.

Depending on your needs, you can use automation to solve some of your creative problems. In many software programs, you can automate certain features to take care of themselves during performance. You might use automation to process the sounds in real time. For example, you can open or close a filter to give the sound more movement. You could use this same technique to have the pan position move from left to right during an extended solo. You might want to automate an instrument's fade-in or fade-out, or use automation to change the balance of different instruments within the mix.

Well, there you go, a new idea to get you additional gigs and more income. Find a buddy and get at it. Remember, it's all about expanding your possibilities and your options, and, of course, mak-