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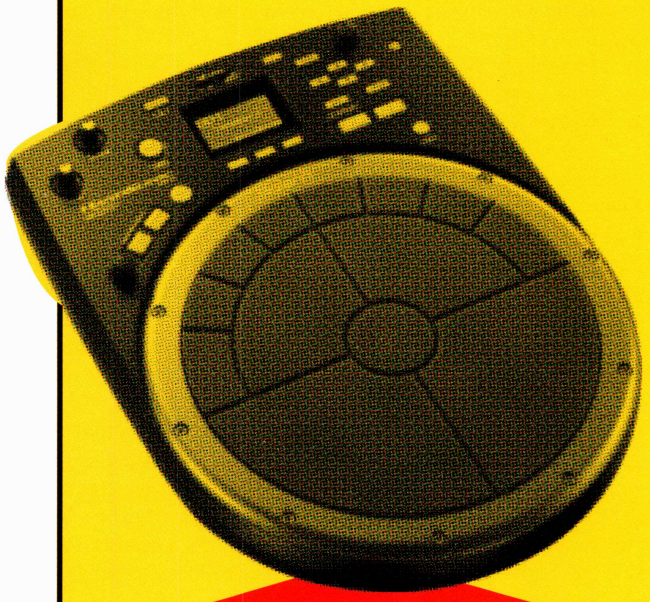

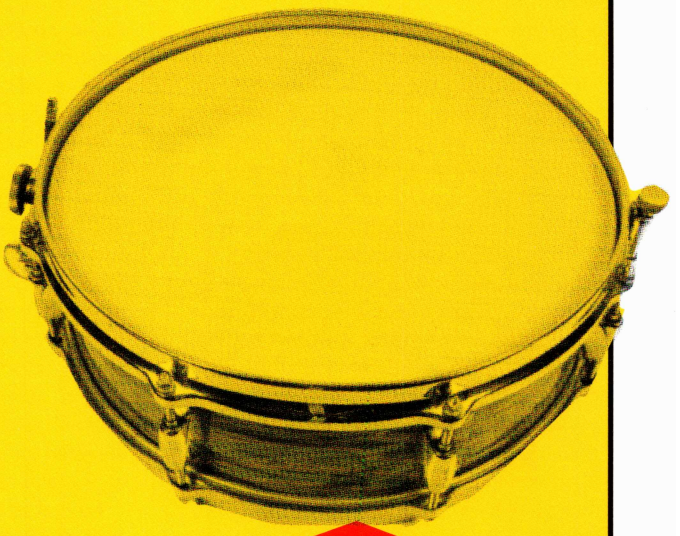

ELECTRONIC VS ACOUSTIC

WILL A CLEAR WINNER EMERGE?

BY NORMAN WEINBERG

As hard as it might be to believe, some in the drumming community still hold an anti-electronics bias. On the other side of the spectrum, there are the folks who play technology instead of learning an acoustic instrument. Too few of us understand that these extremes are nothing more than two sides of the same coin. When you're making music, when you're creating art, when you're expressing yourself in your own individual style, it's a good idea to embrace anything that will make your music better. To do less, and ignore something that might end up being beneficial, is to sell yourself and your art short.

There are things that acoustic percussion can do that electronics simply can't yet, and there are features of electronics that are simply not possible to recreate with acoustic instruments. The truth is the two can enhance each other in your creative endeavors. Here we highlight some of the strengths and weaknesses of both worlds in four main categories: sound, touch, live and studio, and portability. ▶▶▶

SOUND

The two greatest advantages of electronic drums are related to sound. For starters, a near-infinite number of sounds are available at the touch of a button. Don't like that particular snare? Just dial up another one. Looking for that killer drum-and-bass kick? Scroll through hundreds of options and add whatever processing you feel is needed to get the dance floor rockin'.

Second, the acoustic sound of electronic percussion is much softer than that of its acoustic cousins. In fact, a large number of players have purchased electronic drums for this very reason: they give the ability to practice in a low-volume environment.

It's not unusual to find an electronic drum brain with over 1,000 on-board sounds. You may not like them all, but my experience has been that different sounds may be perfect for different projects. Maybe a particular snare drum doesn't sound great by itself but works within the context of a particular tune or mix. Maybe it just needs a little gating to tighten it up, some EQ for a bit more sizzle, a slightly higher pitch, and just a dash of delay to make it perfect.

With MIDI and USB connections, electronic percussion instruments can communicate with a computer, a tablet, or even a smartphone. Apps and software packages often have tons of built-in sounds, and VSTs or AU plugins give the ability to play third-party software. With electronic percussion plug-ins, you can include sounds like brass, strings, choirs, dubstep stutters and wobbles, indigenous instruments, sound effects, and so much more.

But on the flip side, there are all the subtle sounds and nuances that an electronic kit just can't match. The use of brushes is the most obvious example. Have you ever really tried to play the brush sounds on an electronic kit? It's not even close. It will never be close — there are just too many wonderful sounds, colors, and effects created by brushes on a snare drum to duplicate with technology. And electronics can't do justice to the hundreds of rimshot colors available on an acoustic kit.

TOUCH

With MIDI, note-on velocity messages have 127 different possible values. A true artist has more than 127 dynamic levels at their disposal, and a listener can hear more than 127 levels. Even with the amount of variety and flexibility of sound available with electronic percussion instruments, they still can't match the subtlety and nuance of an acoustic kit in a true artist's hands.

Even if your electronic percussion controller claims to "see" 512 different levels of velocity, at some point it's going to have to round off to one of those 127 values. Once you play so softly that you don't activate the trigger, you're not going to be creating any sound. Once you play so hard that you send a maximum MIDI 127 value, you're not going to be getting any additional value by striking the pad with more force.

Acoustic instruments, on the other hand, have no real minimum or maximum points for volume. No matter how softly you play, the instrument will always produce some sound; no matter how much strength you put into a stroke, the instrument could, theoretically, get even louder (that is, until it is totally destroyed).

Being "human" means having flaws. These flaws are not mistakes; they make up the slight variations that give a performance life, individuality, and character. No matter how carefully a player might try to perform a passage with precise consistency, there will always be small modulations in the sound. Maybe the right and left hands are playing 1/16" off of the same spot, or one stick is .05 grams lighter than the other. Maybe the player's grip is slightly different between hands, or the cymbal's attack and tone is different between hits.

No matter how diligently a sample library or drum synth is created, it can't have more than 127 different velocity levels available for a single stroke. It also can't have more than one sample assigned to each velocity. And, while each of those 127 samples could theoretically have individual blends, mixes, layers, round-robins, modulations, processing, etc., it still won't be the same.

LIVE AND STUDIO

Have you ever played or been to a concert where it sounded like the sound engineer either was totally deaf or just had their head in a place where the sun doesn't shine? While the drummer can't be in charge of the entire group's mix and balance, they could (and should) be the person who determines the sound and balance of their kit. Fighting with the exact placement of microphones, individual instrument balances, EQ settings, etc., can often be a losing battle. Electronic drums allow you to simply hand the engineer a stereo pair of cables and have more control over what's being heard.

Taking an acoustic drum kit into the recording studio is actually a pretty big undertaking. It takes time to set up mike stands, run the cables, and get the right sound and combination of mikes, preamps, placement, etc. Again, handing the engineer a stereo pair of cables in this instance may make your life much easier.

Another huge advantage of an e-kit is the ability to record both the MIDI and audio data at the same time. Using any of today's professional-level DAWs, it's easy to record MIDI on one track while recording the audio on a separate track. Then, if you want, you can easily audition different drum sounds by feeding the MIDI track back into the e-kit's brain or to internal or external plug-ins. You can even mix the tracks together.

This same type of flexibility can be achieved with an acoustic recording by using drum replacement software like Drumagog or Steven Slate Trigger. Another way is to record all the instruments to individual tracks, gate them *really* hard, convert them to MIDI with Melodyne or a similar software program, and then import the MIDI tracks back into the DAW. Simple, right?

PORTABILITY AND PHYSICALITY

How many times have you heard this quip as you were moving gear in or out for a gig: "Don't you wish you had taken up the flute?" My answer has always been: "Of course not! Because then I'd be playing the flute!"

With today's technology, it's completely possible to have the entire percussion section in one case. It could be a MalletKAT with internal sounds, a Zendrum with a Stompblock, or even something as small as a MIDI Fighter with an iPad. The portability of electronic percussion can't be denied. As percussion controllers get progressively smaller and gain additional features, and computers and tablets become ever more powerful, the idea of a "backpack drum set" is gaining momentum as it offers portability and ease of use that acoustic sets just can't match.

It should also be mentioned that for pit orchestras in small spaces, electronic percussion might, due to limited space, be the only option. Just try to fit a drum set, vibraphone, timpani, chimes, and concert bass drum all in a 4-foot square area.

But as the venue gets larger, small percussion systems may leave the audience wanting more in terms of visual and corporeal energy. There's something to be said for the visceral physicality of playing an acoustic kit. The stage footprint is generally larger, and the act of striking real drums and cymbals is something that can't be duplicated with electronics.

RANT 1: DIFFERENT FEEL

The biggest complaint I hear about electronic drums is, "They don't feel like acoustic drums." Well, I've got news for you: They're not acoustic drums. I've rarely heard guitarists

A hybrid kit offers the best of both worlds: The feel of acoustic drums with the sound library of electronics

Photograph: COURTESY OF ROLAND HYBRID DRUMS

say, "Man, this electric guitar sucks. It just doesn't feel like my acoustic." Nor have I heard a keyboard player say, "I hate the Hammond B3; it just doesn't feel like a piano." Other musicians seem to understand that acoustic and electric instruments will feel, play, and sound different from one another. In fact, for other instruments this difference is often seen as a positive rather than a negative.

I agree that the touch on an electronic instrument is different. And, even though manufacturers are doing their best to superimpose a "real drum feel" onto their pads, it's unlikely that it will ever be exactly the same. While there's nothing like slamming a killer groove on a beautiful acoustic kit behind a group of outstanding musicians, controlling some of these amazing sounds with electronic brains and plug-ins feels pretty damn good too.

RANT 2: LEARNING CURVE

Another common complaint about electronic percussion and technology in general is the "learning curve." If you think the idea of programming a drum machine, synth, DAW, or plug-in is difficult and complicated, consider how long it took to learn to play the drums. It certainly didn't happen overnight.

Some of us will spend hours, weeks, days, months, or even years getting a groove to feel just right, but we won't spend ten minutes figuring out how to layer two sounds under a single pad in Ableton's DrumRack. I don't understand it. Why be willing to spend $100 or more for an hour-long lesson with a recognized professional to get new ideas for sticking patterns, but be hesitant to put the same sort of energy into reading the manual to customize the hi-hat feel?

RANT 3: THE HUMAN ELEMENT

"Why should I practice so much to play acoustic drums when I can just trigger them off my iPad?" Here are a few reasons: Each instrument sits in a particular balance with the other pieces of the kit, so if you never learn to play "real drums," you will never know how a real kit actually sounds; you won't truly understand the nature and purpose of ghost notes; your understanding of groove won't include the ideas of physical reactions between the feet and hands; and you won't know and tap into what cymbals can really do. In short, if you don't learn to physically play the drums, your programming may always sound like a machine rather than a human being.

BOTTOM LINE

So, who wears the crown? Well, the answer is we all do. For any given scenario, either an electronic or an acoustic instrument might be the best choice. One is not "better" than the other, on the whole. Knowledge is power, and more knowledge is more power. The more you know about both acoustic and electronic percussion and technology, the better off you're going to be both as a professional and in your creative endeavors. Embrace both worlds — you'll be glad you did.