

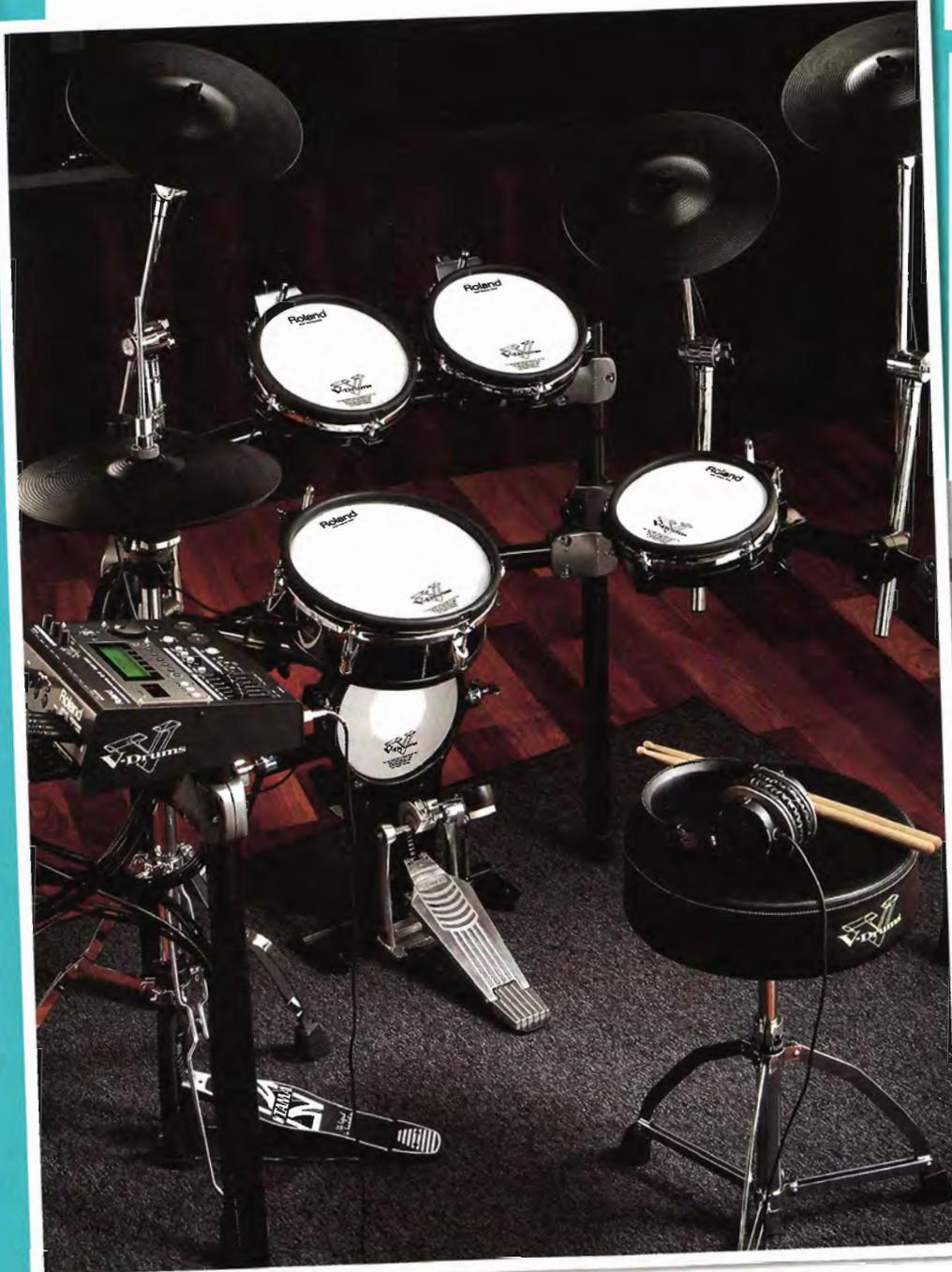
PLUGGED IN

By Norman Weinberg

Let's see if this sounds familiar: A little while ago, you bought an electronic drum kit, justifying the purchase by reviewing all the very cool things that you can do with it that simply aren't possible with an acoustic kit. You brought your shinny new kit home, set it up in the very best possible place, and started going through the preset kits: Acoustic, Hip-Hop, Rock, Power Kit, Reggae, Jazz, and maybe even a kit composed of Latin samples rather than snare, kick, toms, and cymbals. You play a few of your regular beats on each kit to get a quick impression of the sounds, and then settle on your favorite. Fast-forward a couple of months and there's a nice layer of dust on the data entry buttons, knobs, wheels, and faders.

One of the things I enjoy the most about electronic drums is that they're ideal triggers for kick-starting the imagination. Sometimes, hearing a great new snare sound, or a stunning frame drum sample, is all it takes to get the creative juices flowing. I play entirely different beats and patterns when all of my playing surfaces fire fresh sounds.

Hopefully, this article will help prod you to move out of your preset comfort zone into an unexplored realm of unique creative



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FOCUS ON TECH

By Mike Snyder



Avoiding Disaster email after sound check. Mistake #4.

"OOPS," I SAID. Okay, that wasn't quite the word that came out of my mouth that night, but I'm trying to keep it clean here. The sound check for my clinic performance started innocently enough. The drums sounded great, and the venue felt comfortable. Then it all started to go downhill. A number of unrelated technical issues were about to work in concert to make my life uncomfortable, in a very public way.

Looking back at the situation, it was completely my own fault. I ignored all the warning signs. I hadn't heeded my own advice. I had become smug and complacent about my use of technology. Big mistake.

THE BACKSTORY In my haste to pack, I had left the cable I use for playback from my computer at home. So right before the clinic, I popped into a store and got one that worked (or so I thought). It wasn't quite the right cable. To make it work, I had to use adapters. I also opted for the inexpensive cable over the more-expensive, high-quality version. *Mistake #1.*

The first problem actually arose during sound check: Audio from my backing tracks was intermittently cutting out on one side. It was either a problem with the cable or a bad direct box. But with time running out, I got the cable in a position that worked, slapped a piece of gaffer's tape on it, and called it fixed. *Mistake #2.*

Since the Roland SPD-S sample pad was introduced, I have used it exclusively for playback of my clinic backing tracks. Not once has it failed me. But on this day, there wasn't an SPD-S readily available. So I chose to play back my backing tracks through my computer and an external audio interface. I haven't used this configuration in years, and never with this particular audio interface. *Mistake #3.*

The rest of sound check went well. The track playback via computer worked flawlessly. I was playing decently. Life was good. Also, there was free Wi-Fi at the venue, so I checked my

A lot can happen in the time between sound check and downbeat. That night, it did.

HELP ME! The opening tune of the clinic went well. During the second tune, the sound again started cutting out intermittently. It didn't matter what the problem was, it was messing up, and making me very uncomfortable. During the third tune — of course it was a very complex, mixed-meter tune — not only was the intermittent audio problem still there, but the computer playback was stuttering. I had to guess where the music would come back in and try to correct on the fly! The tune was even more mixed-meter than usual!

LESSONS RELEARNED That night, in Nashville, despite the problems, I had a good performance. More importantly, I also relearned a few things.

1. Always use the same physical cables for specific audio connections if possible.
2. Try not to use adapters on cables to change the connection type; they are a problem waiting to happen.
3. Buy high-quality cables, or make your own from high-quality parts. Inexpensive cables are cheap for a reason.
4. If an audio problem arises, take the time to run down the source and fix it. Intermittent problems don't fix themselves — they're warning signs of larger problems to come.
- 5) Do things the way you've successfully done them in the past. I should have used an SPD-S that night and not my computer with an untested software/hardware combination.
- 6) If you do use your computer for audio in a live environment, disable the wireless network. I left my email program and web browser open that night, and the wireless connection active. Additionally, close all applications not being used. This will make all the computer's resources available to the audio application(s) being used.

possibilities, greater personal expression, and enough stylistic variety to keep your boundaries expanding ever outward. First, let's go over a couple of ground rules before we get started.

1. You can't break anything by pressing buttons or moving knobs on the front panel. No matter what you do to access different functions or parameters available on the drum brain, you're not going to do any harm to the hardware, so relax.
2. If you get too deep inside something and can't find your way out, simply exit the edit mode without saving your changes. When in doubt, just turn off the machine, wait about 30 seconds, and turn it back on again.
3. If you really get screwed up, you can always call back the factory defaults. Every kit on the market has a way to restore all factory presets. This will make the drum brain act and respond just as it did when you first took it out of the box. Check your manual to find out how to do this.
4. If you're thinking: "I don't have time to mess around with this stuff," or "I tried it once and it was just confusing and stupid," consider this: If you devote just five minutes at the start of each practice session to learning more about your kit — not exactly a huge investment — I guarantee you'll be a programming pro in just a few sessions.

A World Of New Sounds

Getting new sounds to sit under your drum and cymbal pads is one of the easiest edits you can make. While details will vary depending on the brand and model of your drum brain, you'll need to enter a kit edit mode to make these changes.

If you're using an Alesis DM5, simply press the "Voice" button. If the "Voice Chase" command is active, you'll select the pad to edit simply by striking it. Then select the voice group (i.e., kick, snare, tom, effect, percussion) and the individual sound (Rap Wave, Big Plate, Ghatam Low, etc.). On the Roland TD-9 brain, simply hit the F1 button to change the instrument, strike the pad you want to edit, and start assigning your new sounds by turning the value knob.

If you haven't really experimented with this in the past, a good starting point is to fiddle with the sound of a kit's snare drum. The snare is one of the most important signature sounds of the kit, and making even a minor change could yield big dividends. If you've got two mounted toms, you might try changing one of them to a utility snare sound — something like a small piccolo drum.

If your kit has stereo pads that let you assign one voice to the head and another to the rim, you might try altering the rim sound to go beyond expectations. By programming something like a timbale under the rim of your floor tom, playing



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rimshots will create a composite sound that's totally unique. If you find that the timbale is overpowering the tom's color, make an adjustment to the timbale's volume.

Why should you consider assigning new sounds under your pads? On the gig, you may decide that playing a uniquely voiced kit for different songs is an effective way to give style, identity, and mood to the compositions. Unless you're Phil Rudd, you wouldn't dream of playing the same beat for every song. Why are you content with playing the same drums with the same sounds for each song? This is one of the main advantages of the electronic kit over the acoustic.

Total Tonal Control

In today's musical landscape, the sonic quality of a song is every bit as important as the lyrics and the formal structure. In many traditional musical styles, the kit

developed and evolved to exhibit a particular tonal signature through years of experimentation and evaluation. A typical "jazz" kit, while endlessly variable, has a number of common properties: Ride cymbals are going to have a good deal of stick sound without too much build, in order for the highly syncopated and active rhythms to be clearly heard against the tones of the piano or the sound of a pick strumming guitar strings; the bass drum is going to be tuned a little on the high side so that its color can exist on a separate plane from the string bass or bass guitar.

But what if you go against the grain and change this tradition to some degree? By increasing the upper frequencies of a rock-style ride cymbal, and perhaps shortening the decay, you should be able to find a sound that works in the jazz style yet is not the garden-variety jazz ride.

LISTEN CLOSELY TO YOUR MISTAKES AND YOU MAY JUST FIND CREATIVE GENIUS

To tweak tones, you'll need to access the edit functions of the actual sound, not the pads. Again, the exact method of reaching these parameters depends on the brand. Once you've reached the proper edit mode, you'll be looking for the EQ parameters.

Depending on the flexibility of your kit, you may find nothing more than adjustments for treble and bass — similar to the adjustments available on a basic car radio. On more advanced kits, you'll find controls for high, mid, and low frequencies that are totally adjustable in terms of frequency (which parts of the sonic range are affected by the controls), gain (the amount of boost or cut that is applied to

the selected frequency range), and Q (the width of frequencies that are selected). Your kit may offer a number of pre-defined filters such as low-pass, high-pass, shelf, and so on that have their own settings and controls. You might even find controls that determine how the EQ and filter settings affect the sound over time.

When you run into parameters that have odd names, it's not always necessary to go back to school to earn a degree in electrical engineering. Simply take that parameter to its lowest value, and while you're playing the sound, sweep the parameter to its highest value. Listen carefully and see if you can determine what factors are changing. Is the sound getting brighter/darker, closer/further away, crisper/muddier, or maybe more or less focused? Concentrate on the attack of the sound, the "meat" of the sound (steady state) after the attack, and the way the sound decays over time. By doing some critical listening, you should be able to determine how this parameter is altering the sound.

Tuning In

One of the easiest alterations you can make to a particular sound is the tuning. On many drum brains, you can adjust the tuning of an instrument over a pretty huge range. The entire MIDI range spans more than 10 octaves, with note numbers running from 00–127 (or 01–128 depending on your device). The lowest note on a piano happens to be MIDI note number 21, and the highest note number is 108. So you can see that the audio range of your instruments could easily exceed the entire range of the piano.

In addition, many modules let you adjust the tuning to a narrower range than the semitones of a keyboard. If your

STUDIO SECRETS

By Jake Wood



Acoustic Treatment: Prepping A Mix Room For Accuracy

THE ROOM IS everything. From tracking to mixing to mastering, the acoustic properties of a room play an enormous role in the making of a record. Taking the time to acoustically analyze and treat a room so that it truthfully reproduces recorded audio can save hours of mixing, fixing, and nixing, whether you're working from a home rig or a professional setup. Unfortunately, an absolutely neutral acoustic environment is practically impossible, but with the aid of a condenser microphone, feng shui acoustics, and reverb battling foam, rooms can be treated to have a relatively flat (neutral) frequency response.

SHOOT THE ROOM In order to effectively treat a room, it's first important to analyze what is happening to the audio as it leaves the speakers. Instead of

trusting nature's microphone (your ears), position an omnidirectional condenser microphone at ear level of the engineer's cockpit. Next, find a tone generator capable of emitting pink noise (roughly equal amplitude at all frequencies) and an audio spectrum analyzer that functions in real-time (Spectrafoo is a great tool for the job, and there's always freeware). Crank the speakers, pray for understanding neighbors, and blast away until it sounds like an airplane turned up to 11.

Using the spectrum analyzer, compare the graphic representation of the generated sound and the recorded sound (Spectrafoo is great for this because it supports multiple graphic plots for both audio sources). There will be discrepancies between the two plots (contrasting dips and peaks of varying dBs) — and this is what needs fixing. The goal is to maneuver the input plot into identical form with the output plot.

FIXINGS Start with the speakers. If a sub is involved, adjust its gain, crossover point, and phase. For the monitors, placement is everything. Try moving them a few inches and adjusting the angles, all while observing the spectrum analyzer for discrepancies. From there, the next step is to treat the room with various foam, baffles, and bass traps. Another option is to compensate with a graphic equalizer inserted into the signal chain. If all else fails, mastering engineer Michael Romanowski suggests it's "probably time to get a real estate license."

THOUGHTS Be sure to also check the bleachers. The mix always sounds different to clients on the couch. Plant the mike in whiner-territory and check the foam.

Every trifling detail counts. Microphone placement, inline "passive" signal routers, and even speaker cables have a cumulative effect on the perceived output. Live up to the engineer's stereotype and start nitpicking.

PLUGGED IN *Beyond 001*

THE BEST WAY TO LEARN HOW TO TAKE CONTROL IS TO TWIDDLE WITH THE KNOBS AND DO SOME SERIOUS LISTENING

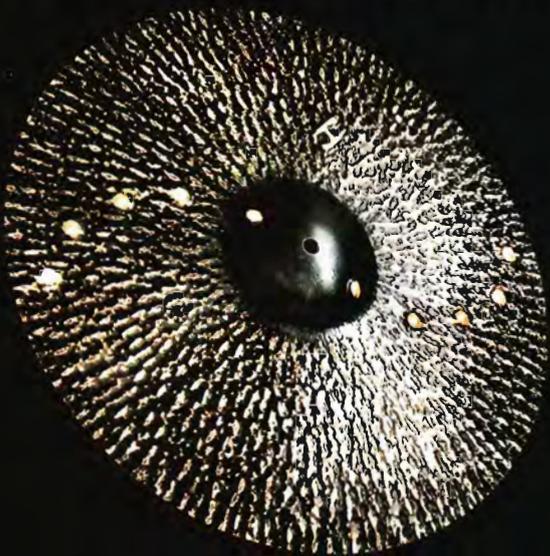
drum brain lets you tune in "cents" or has a fine-tuning parameter, you can create pitches that are "in the cracks" of the standard pitch set. To be precise, a single cent is one one-hundredth of a semitone. So if you raise the pitch by 50 cents, you've increased the pitch by a quartertone.

The vast majority of drum brains and drum modules fire recorded samples of drum sounds. So why would you want to mess with the pitch in the first place? Well, for one reason, your preferences may not match those of the editors of the sound set. The exact recording may also have been pitch-altered before being

finalized. On less-expensive kits, it's common to use the exact same pitch-shifted sample for high and medium toms (as one example) in order to save memory. If you don't like the decisions that the programmers made for you, you should have the authority — nay, the right — to change the pitches to those that you feel better suit your musical ear.

If you're designing an entire kit of percussion sounds rather than drum sounds, tuning becomes a critical factor in the authenticity of the sound set. Congueros, bongoceros, timbaleros, and other Latin and South American musicians spend a good deal

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of time determining the perfect pitch balance between quinto, conga, tumba, or the hembra and macho bongos. To simply go with the factory defaults is often a cop out and could be a mistake.

Extreme tuning can also be a lot of fun. There's nothing quite so funny as a bass drum tuned up a half-dozen octaves. Guess what? It's not going to sound much like a bass drum anymore! Maybe you'll use that sound as a substitute for a hi-hat or a secondary snare instead. By using very extreme tunings, you can often come up with entirely new sounds that can give a composition a unique personality. And with these new characters, create an entirely innovative groove.

Effects

Higher end kits have a number of bells and whistles that allow you to further shape your sounds. Effects such as reverb, echo, and delay can be used to place your sounds in a virtual reality such as a concert hall, church, cave, or dome stadium.

Other effects, such as compressors, EQ, and chorus can be used to help your sounds stand out in a recorded or live mix. If you want to add more edge to your sounds, you might think about dropping in some distortion, wah, flanging, or ring modulation. Of course, not every brain is going to have the same set of sonic effects. Some let you add these colorations to individual voices, while others can only apply effects to entire kits without any individual instrument controls. However, no matter how basic or sophisticated these tools may be, the best way to learn how to take control of them is to twiddle with the knobs and do some serious listening.

A little experimentation goes a long way when adding effects, and you can be as subtle or as over-the-top as you wish. There are no rules concerning what sounds and effects might go well together or how they might be used at home, in the studio, or on the stage. If it sounds good to you, well, there you go.

Once you're comfortable with assigning new sounds, adjusting the tone and tuning, and adding some effects, it's time to push the envelope. Approaching your electronic kit like a sophisticated video game is not such a bad idea. It's not called "playing" for nothing.

Mix & Match

Sometimes it's good to shake stuff up. Want some fun? Try assigning your sounds to all of the wrong pads. Keep the kick, snare, toms, hats, ride, and crash, but put them where they don't belong. Then try two different but related things: playing the same beats and fills physically that you would normally play (the sounds will all be different), and playing the same beats and fills sonically that you normally play (your actions that fire the sounds will all be different).

This little experiment will really turn your head around, and it won't take long for you to come up with some hip

patterns that are totally different than what you're used to playing. Listen closely to your mistakes and you might just stumble upon some hidden creative genius.

Melody & Harmony

Some of our favorite players are those who can play their kit melodically. If you want to expand your own abilities to play in a melodic manner, there's no better way than to assign melodic instruments to your pads. Several kits have the ability to assign non-percussion sounds to the pads. Piano sounds and bass sounds are great places to start because they have a similar attack and decay structure as drums. But, you may find some cool synth sounds, or even traditional orchestral instruments that work well for you. Simply assign the sounds to your pads and use the tuning adjustments to create a melodic pitch set. If you're playing a 5-piece kit, using a

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pentatonic scale (all the black keys) is a no brainer. Putting these sounds under your cymbals will give you a wider selection of pitches to play with. If you've got stereo pads, you might think about keeping the drum sounds on the heads and assigning your melodic pitches to the rims. This way, you can have the best of both worlds.

If your kit doesn't include these types of sounds, you can use tom sounds in much the same manner. Instead of playing precise pitches, you can tune the toms to relative relationships that will still imply a more melodic approach to your playing.

If your kit allows stacking notes or playing alternates, your options for playing melodically increase exponentially. Stacking or layering notes allows a single stroke to fire a number of different sounds at the same time. Depending on how you might want to use this feature, the stack can be a number of drum/percussion sounds, or it might be a 3-, 4-, or even a 5-voice chord.

When programming a pad to perform alternates, each stroke will move forward through a series of steps that could be programmed to fire totally different sounds. Like the stacking features, you could choose to program drums or pitches. By programming some of your pads to fire chords and others to fire a series of alternating melodic notes, you can move your melodic drumming into an entirely new dimension.

So, take the challenge. Dust off those knobs and sliders, and dive right in. Remember that you can't hurt anything, and you just might find some wonderful new applications and creative ideas that push your playing forward. After all, that's what we're all trying to do — become better players both technically and creatively. ■

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