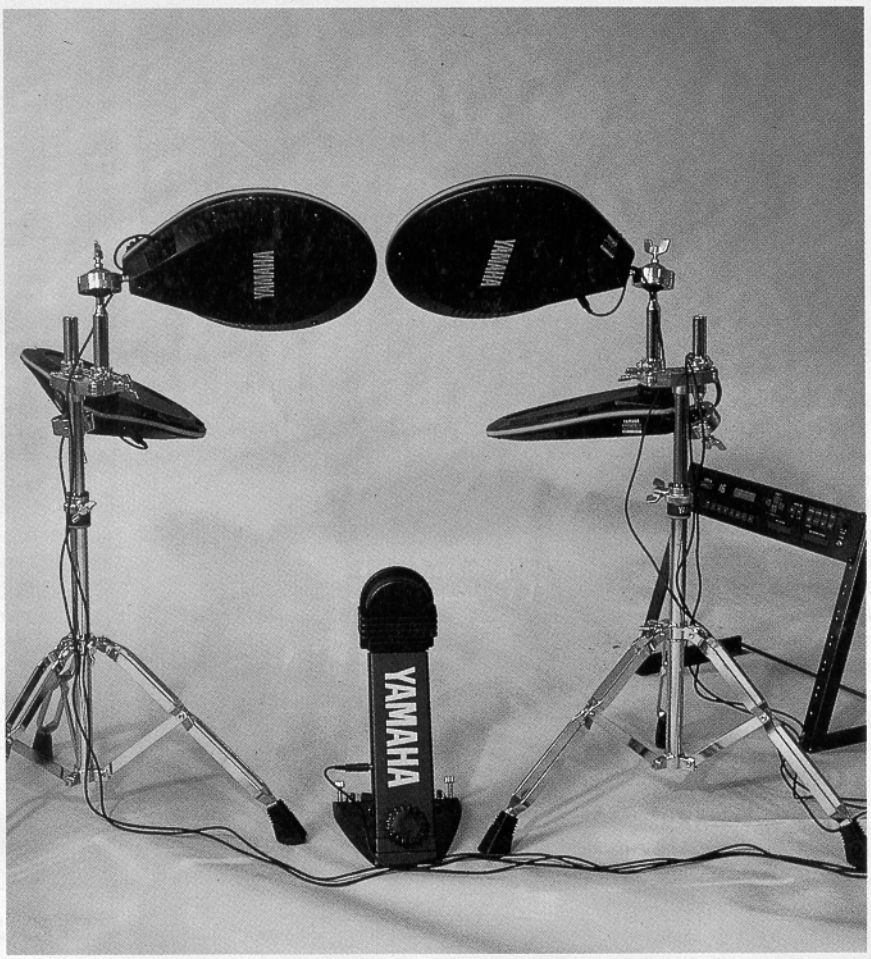
Yamaha D8

Sometimes it happens. Yamaha, a company known for its innovative and exclusive technologies, has released an electronic drumkit that isn't on the cutting edge of technology. Perhaps Yamaha was thinking about the working drummer—someone who desires an electronic kit for a more utilitarian purpose ...such as playing music. Cutting-edge technology comes with a cutting-edge price tag. Many drummers don't want to (or simply can't) pay the price for the newest state-of-the-art gear. The *D8* doesn't contain every feature that you may desire in an electronic kit. It does contain several features that are clever, well thought out, and well-implemented. For those of you who may be looking for a first-class electronic kit—but might not want to shell out the really big dollars that extra features demand—this kit may be just what you've been looking for.



The Yamaha *D8* electronic drum system consists of one *PSD8* (snare drum), one *PBD8* (bass drum), and three *PTT8* (tom tom) electronic pads, two *WS 820* double tom stands, and the *PTX8* Percussion Tone Generator.

The Pads

Since the pads have been reviewed in an earlier issue of *Modern Drummer* (June 1987), let me briefly give you my impression. Overall, they are very playable. The "skin" area is a nice compromise between the hard "tabletop" surfaces of some (notably the early Simmons and Roland pads), and the "mushy" surfaces of others.

The *PBD8* bass drum pad is quite nice. Having a much softer striking area than the other pads, it felt quite a bit like an acoustic bass drum. Compliments to Yamaha for determining that a bass drum pad doesn't need to be 22" in diameter! When folded up for storage or transportation, the *PBD8* takes up very little space. I did have a little problem with it crawling forward when it was played hard. This might be solved by placing the *PBD8* on a different style carpet (I was using the type that sits inside the front door of a K-Mart) or sharpening the spurs.

I had a bigger problem with the *PSD8* pad. This pad has one trigger under the "head" and another, separate one under the "rim." The playability of this pad was excellent, in that it was extremely easy to catch rimshots and get the sounds from both triggers at the same time. The negative aspect is that when I played only one trigger (either the rim or the head), I still got both sounds! When hitting the head, the sound assigned to the rim was quite soft, but was still there. Adjusting the sensitivity on the *PTX8* helped a little, but never fully solved the problem. Although not Yamaha's intention I'm sure, you could approach this pad as one that can give you a blending of two different sounds.

The Tone Generator

The *PTX8* tone generator is an eight-voice drum synthesizer (taking up two rack spaces). It can be used in live performance in conjunction with electronic pads, as an additional sound source for a drum machine, or as a percussion synth in sequenced performances.

The layout of the back panel is clean and easy to understand. There are eight inputs for pads (clearly labeled) and eight individual outputs (one for each pad), as well as mixed stereo left (also used as a mono mix) and right outputs. As would be expected, plugging a cord into one of the individual output jacks removes that pad's sound from the mixed outputs. This is an important feature in a recording studio. By removing the individual signal from the main mix, it is possible to send the bass drum and snare (for example) to two different outboard processors, while using the mixed outputs for the toms.

There are three additional pedal jacks: two for kit increment/decrement and another labeled "footswitch" (more on this later). MIDI-In, MIDI-Out, and MIDI-Thru jacks complete the back panel.

The front panel of the *PTX8* is logically designed and fairly easy to work with. There are two large, red LED's that display which of the 32 drumkits is currently being played. In addition, a two-line by 16-character LED provides the user interface to the internal editing features of the brain.

The control buttons are arranged into four main function groupings. The first consists of eight buttons that are used to select which of the eight pad inputs you are currently working with when editing sounds. The second is a group of four buttons aligned in an up, down, left, right arrangement. The up and down buttons are used to change from one editing parameter to another, and the left-right buttons are used to move the cursor from one position on the LED display to another. There are the standard increment and decrement buttons (also used to select the current drumkit), and a set of eight more buttons that call up a variety of editing functions, such as selecting from internal and cartridge memories, and ad-

Electronic Kit

by Norman Weinberg

justing the sensitivity of the inputs. By grouping the control buttons according to their functions, Yamaha has made programming the *PTX8* a little easier. In addition to these controls, there is a headphone output jack with its own volume control (a very nice feature), and two cartridge slots.

Voice Architecture

The voice layout of the *PTX8* is not too complex, but it might be helpful to clarify a few things. There are 26 percussion "waveforms" (12-bit companded PCM sounds) in the internal memory. You might think of these waveforms as the raw data or building blocks of any sound. To create a "voice," you select a waveform (perhaps you want to start with waveform #14, called "low tom"), and then edit any of its musical parameters (possibly bringing up the pitch or making the sound decay faster). This edited version of a waveform becomes a "voice" when it is saved to one of the voice memory locations. Since the *PTX8* can remember 64 voices in its internal memory, you can access up to 64 different sounds.

When you play the drumkit memories, you're really playing a programmed combination of voices that have been assigned to fire when a certain pad is struck. Perhaps drumkit number one uses voice #44 for the snare pad, voice #22 for the bass drum pad, and voice #3 for one of the toms.

One of the nice things about this type of voice arrangement and assignment is that any sound can reside under any of the eight pad inputs. It's possible to have a drumkit that consists of eight different snare drum sounds—or a kit with eight of the same snare drum sounds. If you like to "turn the beat around," you can assign a bass drum voice under the snare pad and a snare drum voice under the bass pad. Even if this idea doesn't grab you, you can appreciate the flexibility that is available when using this type of voice-to-pad assignment.

The Voices

In order to evaluate the sounds contained in the *PTX8*, I listened to the "raw" waveforms without any editing or enhancement. Of the 26 contained in the internal memory, the 5½" snare, the piccolo snare with rimshot, the high tom, and the electric snare #4 are noteworthy. But you would seldom use the raw waveforms for your voices. More often than not, you're going to want to create your own distinctive drum sounds by applying some of the editing possibilities to them. Customizing the original waveforms is one task where this drum brain really shines!

Here is a list of what you can do to each waveform when creating a voice: change its volume level (31 positions), change its pitch (a five-octave range), adjust any of the six stages in the voice's envelope, adjust its bend range (how far it bends up or down) and bend rate (how fast it bends), and turn on a loop to create extra-long sounds. The good news: With all these options, it's going to be a long time before you tire of the voices that can be created. The bad news: Not everything you create is going to sound great.

With a five-octave tuning range, it's not surprising that extremely high pitches tended to sound choked and had a "barking" quality. Likewise, extremely low pitches were noisy, grainy, and had a good deal of aliasing to them. Some of these problems can be overcome by creative use of the extensive envelope controls.

My main objection with the voices are the poor loop points used on several of the sounds. The loop mode is necessary if you want to create long percussion sounds, since many of the original waveforms are very short. The manual explains that the best loop points have been preset at the factory (read this as "non-adjustable"), and that "some unevenness is inevitable." Well, for several of the loops, "uneven" is just too kind. A few of them sounded nothing short of terrible, with a prominent "swoosh" or "wah-wah" at the loop point.

When you tire of the sounds that are possible with the *PTX8*, don't despair: You can insert a ROM voice cartridge and access up to 28 additional waveforms. Currently, Yamaha has three voice cartridges available (the same ones used for their *RX5* drum machine).

The Drumkits

While we're talking about controls that are available in drumkits, keep in mind that each pad can be programmed to play any of the 64 voices in the internal memory. Even though there is a slot for a RAM cartridge, it's not possible to access voices off the cartridge without first loading its contents into the internal memory. This means that, even with the cartridge inserted, you still can only reach 64 voices at a time. In addition to this limitation, there is no provision for loading a single voice from the cartridge into the internal memory. It's either load all or nothing. This makes creating custom RAM cartridges a little more bothersome.

Along with selecting any voice, each pad can also have its own level and pitch setting—which adds a great deal of flexibility to the unit. Instead of using up four voice memory locations to store the same tom sound at four different pitches, you can use your voice memory for storing new timbres, and adjust the pitch of those timbres when you're building the drumkit. In other words, all the pads could be assigned to play the same voice, but at different pitch and volume levels.

There are four "touch" controls for each pad. These four parameters offer an exceptional amount of control during a live performance. The Touch Pitch parameter determines how the playing volume will effect the pitch. Touch Attack controls how the playing volume will effect the attack rate. Touch Decay can be used to control the sound's overall length through volume. And Touch Reverse can be activated to cause the voice to play backwards.

In terms of MIDI implementation, the unit's strong suit is flexible assignment. For each of the 32 drumkits, each pad can have its own MIDI transmit channel, its own note number, and its own gate time—which is not locked to the voice's gate time. This is a dynamite feature that allows the drummer to send a note-off MIDI message that will best suit an external sound generator. You may want a short snare sound from the *PTX8* combined with a longer snare sound from another sound generator. With the *PTX8*, you can do this with ease. In addition to the individual pad MIDI messages, you can program each kit to send a single MIDI program change message whenever that particular kit is called up to memory. For example, you can program the *PTX8* so that calling up drumkit #30 causes your external synth to jump to any program you desire.

"Nice" Things

Let's take a look at some of the other nice features incorporated into the *PTX8*. The unit supports ten chains of up to 32 steps per chain. Chains can be extremely

convenient in a live performance situation, and with 320 possible steps, you should have enough steps for just about any gig.

The kit increment and decrement footswitch controls can be initiated by a pad instead of a switch. Simply plug a pad into either of these jacks, hit the pad, and watch as the new kit is called up into memory. If you're using one of the chains, striking a pad connected to the increment jack will advance you through the steps of the chain.

One of the coolest features of the unit is the footswitch function. When a footswitch is connected to this jack, you can instruct the *PTX8* to change a variety of parameters for as long as the footswitch is depressed. Changes can be made to the pitch, the decay rate, the bend rate, the bend range, and reverse on/off settings. While the *PTX8* will let you memorize parameters for each of the eight pad inputs, they are global for the entire machine. In other words, the footswitch changes are not memorized into each of the drumkit memories.

Programing voices, kits, and chains is easy once you understand the process. All the features are accessed with the parameter and cursor buttons, and the data increment-decrement buttons scroll when held down for faster entry. When programming voices, the eight pad-select switches on the front panel will also double as triggers. Just hit button number four to hear the sound assigned to that input. This means that it is possible to design voices and drumkits without having to connect the pads.

"It Would Be Nice" Things

The *PTX8* does what it does very well. Every feature it supports worked properly. However, it would be nice if the MIDI implementation were a little more complete. When an electronic set gives you this much control over its internal sounds, it would seem that it should give you more control over external sounds.

It would be nice if the pads could send a variety of MIDI note numbers based on velocity (dynamic note shift), or even send multiple MIDI note numbers (simul-notes) for stacking sounds or playing chords. It would be nice if the machine could send or transmit any of the standard control change messages. It also can't recognize MIDI mode change messages, and doesn't support local on/off (although you can program any or all of the eight pads to ignore MIDI note-on commands).

Even though the *PTX8* has individual outs, it would be nice if you could program a pad's placement anywhere in the stereo field for the mixed output. The pads are "hard-wired" to certain positions that can't be changed. If you want the snare drum to come out of the left channel on one tune, and the right channel on another tune, your only option (other than using the individual outs) is to reach behind the unit and change the pad's input channel.

I'm not sure why Yamaha limits the machine to reading voices from the internal memory only. It would certainly be a more powerful device (and Yamaha could sell more cartridges) if one could create a set using voices from both the internal and the cartridge memory at the same time.

Finally, it would be nice if the manual were a little more comprehensive. All of the features are covered, but several aren't explained very well. The manual tells you which buttons to push to access the different functions and their lowest and highest possible values. For someone with a good deal of electronic experience, it's not too tough. But if the *PTX8* is your introduction to electronic musical instruments, plan on getting some support from the dealer or a friend. Give yourself several hours to experiment with the envelope settings, touch settings, and bend parameters before everything sinks in.

Bottom Line

This set is going to serve the needs of many drummers. The basic sounds are quite usable (I'm only bothered by some of the loop points), and the extensive degree of editing that is possible makes them even more flexible. With the four touch-control settings, there is a good deal of power and control available for live performance, and the individual outputs are great for the studio. Being able to call up different drumkits or advance the steps in a chain with a pad is a handy feature, and the footswitch changes are nothing short of *trés cool*!

I was hoping that this set would be a marriage between the sounds and voice control of Yamaha's *RX5* drum machine and their *PMC1* Percussion MIDI Converter. Perhaps this was too much to hope for. After all, those two units combined cost quite a bit more than the *D8* system (and you would still need to buy pads and stands). Instead, it seems that Yamaha decided to take a little bit from each, and present it in a single package that was within the financial reach of most drummers. The suggested retail price of the *D8* is $1,795.00. For more information, contact Yamaha at P.O. Box 6600, Buena Park, California 90622, or call 1-800-342-7826.