Sometimes it happens. Yamaha, a company known for its innovative and exclusive technology, has released an electronic drum kit 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 DB 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 fine classical electronic kit—maybe you might 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 DB electronic drum system consists of one PD50 (snare drum), one PDDI (bass drum), and three P750 (tom) electronic pads, two W820 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 impressions. 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 some "soft" surfaces of others.

The PDDI 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 loaded up for storage or transportation, the PDDI takes up very little space. I did have a little problem with it caving forward when it was played heavily. This might be solved by placing the PDDI on a different style carpet.

I had a bigger problem with the PD50 pad. This pad has one trigger under the "head" and another separate under the "rim." The playability of this pad was excellent, and that it was extremely easy to catch rimshots and get the sounds 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 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 tom. There are three additional pedal jacks: two for pad increment/decrement and another for pad "footswitch" (more on this later), MDF, MDF-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, back-lit-character LED displays that display the current and digitized value of the 16 drum pads currently being played (in addition, the LED displays the user interface to the internal editing features of the PTX8). 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 that are used to select the pad number. The up, down, left, right, up, down, left, right, and 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. This menu, much like 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 complicated, but it is probably a little difficult to clarify a few things. There are 26 percussion "waveforms" (12 kit-composed 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 #4 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 assignment and arrangement 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 boat around," you can assign a bar 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. One of the 26 contained in the internal memory, the S/H snare, the piccolo snare with rimshot, the hi-hat, and the electric snare are really worthy. 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 shined!

Here is a list of what you can do to each waveform when creating a voice: change its volume level (13 positions), change its pitch (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 good.

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

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

When you tire of the sounds that are possible with the PTX8, don't despair. You can insert a KMX voice cartridge and access up to 28 additional waveforms. Cartridge number 27 has three voice cartridge available (the same ones used for their ICS drum machine).

The Drums

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 can still 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 low sound at 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 Parameter determines how the playing volume will affect the pitch. 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 dynamic feature that allows you to leave the 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 simple 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 #10 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 120 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.

Once the features of the unit are familiar, connecting the footswitch to the pedal, the delay 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.

Programming, 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 bottom number four to hear the sound assigned to that input. This means that it is possible to design voices and drumkits without ever 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 setup 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 shifts), or even send multiple MIDI note numbers (simultaneous) 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 mode 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 "hardwired" 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 another time, your only option rather than using the individual output to reach the output 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 press 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, plans 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 hi-hat sounds are quite usable if 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 really quite a blessing.

I was hoping that this set would be a marriage between the sounds and voice control of Yamaha’s A2S drum machine and their PM2 (Percussion MIDI) Convent. Perhaps this was too much to hope for. After all, these two units combined cost quite a bit more than the DI system (and you would still need to buy pads and stand). Instead, it seems that Yamaha decided to take a little bit back in both price and present it in a single package that was within the financial reach of most drummers. The suggested retail price of the DI is $1,795.00. For more information, contact Yamaha at P.O. Box 6660, Orange, Califonia 92662, or call 1-900-342-7826.