Okay, let's check this baby out — five speeds, 480 Sabian cymbals with dual cymbals, 350 bass drums, about 10,000 cover the quarter in 6/4 and 1/8 barrier — winning bar! No, it's not the kit, it's the new V-Drums from Roland. While they can cover the quarter mile in under five seconds, the kit does have an amazing collection of features. Check out these standard features:

- Roland's proprietary software
- The Bar: a higher-quality, more immersive experience
- Higher: a customizable sound palette

54 backing instruments (drums, bass, and more), 96 drum kits, 16 chains each with 32 steps, eight audio outputs, and a 64 x 160 segment LCD for on-screen editing.

In addition, this kit contains some special features, such as 30 different audio effects (echoes, delays, flangers, and the like), a metronome with a range of 20-260 bars that can count-out loud, an internal sequencer, and, well, read the next paragraph.

The Big News. If you've kept your eye on the street, you've heard the buzz about this kit. Yes, you can play it with hand-play; yes, you can set up where you play on the head and adjust the sound accordingly. And, yes, you can edit some parameters that are truly mind-blowing

V-Drums use Roland's COSM (Composite Object Sound Modeling) technology to simulate how a drum or cymbal might react to changes in performance in real time. For example, how does a drum's timbre change when played at the edge of the drum as opposed to the center of the drum? And even more importantly, how does the sound change as you move from one edge to the other in real time? In addition to changing the sound's color based on the position of the strike, the V-Drums' COSM engine generates similar changes based upon a series of "what if" scenarios. What would the drum sound like if the shell was made of wood, steel, or brass? What if the shell was only 1/12" deep? Or 5" deep? What would it be like if...?
sound like with a Pinpoint head and an
external muffler using a condenser micro-
phone inside the shell in a garage going
through a parametric equalizer?
Are you ready to get the power?
The Stand. The V-Drum rack-style stand is a
beauty — strong tubular metal construc-
tion in a cool, deep blue color. The rack con-
ists of three curved sections: the main front
section, and two arms, each with two hori-
zontal support bars for added stability.
My favorite thing about this stand is that
it comes completely assembled. Just take it
out of the box, set it on the floor, and
place the pad on top. The stand itself is
attached to the subframe with a clamp that
allows for adjustment on two planes.
The V-Basic Kit (TD-10/DR) is compara-
tive to a four-piece acoustic kit. It comes
with the rack stand, two PD-120 pads (snare
and floor tom), one PD-140 pad (bead
tom), one PD-7 (hi-hat), one PD-9 (ride
cymbal), the bass drum trigger pad, the hi-
hat pedal mechanism and the keys of the
system, the TD-10 sound module. It’s a basic
kit with everything one might need to get
started.
Cables are included for each pad, as well
as a set of clips to keep the cables organized
around the stand. If you wish to go to the
limit, you can add the V-Expansion kit,
which turns the basic V-Drum kit into the
full-blown system, containing another PD-
120 and PD-100 for additional small and
large toms, two PD-9 pads for cymbals and
two extra cymbal mounts. As an extra conve-
nience, adding the expansion kit only
requires the removal of one of the stand’s
cross-pieces, so you won’t need to totally dis-
mount the rack to add additional drums and
cymbals.
The Pads. The new Roland PD-100 and
120 pads are quite different than other elec-
tronic drum pads. Instead of a plastic body
with a rubber playing surface, these instru-
ments look very similar to “normal” acoustic
drums. They consist of a wooden shell just
over 4” deep with six tension casings. The
counterhoop is made of metal with a rubber-
ized coating that helps to make the kit qui-
ceter when played. The new drumhead mater-
The PD-100 and 120 pads are single-headed instruments. Instead of using a bottom head, the lowest portion of the drum has a bar that extends from one end of the shell to the other. On the top of this bar is the sensor—a small cone-shaped rubbery device that extends up to, and surrounds, the center of the head. Mounted to another section of the conus is a piece that seems to be the sensor for the rim. There is no doubt that the PD-100 and 120 track, feel, and respond better than any other electronic surface on the market. The PD-9 symbolic pads that come with the kit have a skin under the main surface and FSRs under the rim, so the pad can sense if you're striking the edge for ambient sound or grabbing the edge to choke the cymbal.

The Back Panel: The TD-10’s back panel contains jacks, jacks, and more jacks: 12 trigger-in jacks for the kit, a foot switch jack (used to select kit or start and stop the internal sequencer), the hi-hat control jack, for the hi-hat pedal), master audio outputs, three sets of additional stereo outputs, a stereo headphones jack, a “mix-in” jack (for connecting a CD or cassette player), a MIDI Out and MIDI-In. Oh yeah, I forgot to mention that there is also a slot for a card (M-512E) that can store all the information from the entire TD-10, including all drum kits and sequencer performance data.

Performance: Once the pads are all cabled into the brain and the outputs are connected to an amp, it’s time to do some playing. Roland has long been known for its outstanding drum sounds, and this box is no exception. The company has done a great job of programming useful factory kits that will keep a player’s interest both in the store and after they take it home, as well as a few that seem to be intended for demonstrating what the unit can do, rather than a realistic performance.

When a kit is called up, the huge display screen offers the name of the kit and a good deal of additional information, including the kit’s number indicated in huge, red LEDs. If the kit is programmed to respond to each playing, the lower eight portion of the screen displays a brush icon. Below the kit’s name is a series of four abbreviations: AM for
ambience, CL for compressor, EQ for equalization and FX for effects. The display indicates if these features are turned on or off for the entire drum kit in a very clear manner, and all the abbreviations are reverse highlighted when on, and plain text when off.

Let's take a quick look at the features that are available with these four options. Ambience is adjusted in "Studio Settings." As you might expect from the name of this section, the Studio Settings parameters adjust the type of room, its size and wall material, the microphones used and the placement of ambient reverb. When selecting the performance space, you can choose between front (most dry to most open) beach, living room, bathroom, studio, garage, indoor room, theater, cave, gymnasium and dome stadium. Once you have selected the performance space, you can adjust the drum from city small, medium, large to huge the size to check out the extremely cool 3-D rendering cube so you adjust the room's size.

If there's not enough variety for you, you can easily change the room's walls from sound to plastic or glass (each change provides its own unique character to the sound). You can also select the microphone type to "ruin" the sound (condenser, dynamic, and "no mic"), and the mixer position in relation to the drum (outside, standard or inside). The last adjustment available in this area is the selection of the placement of the ambient microphone. You have the choice of a low position (similar to floor micro) or a high position (similar to overhead mikes).

Once your settings have been revealed to your ears, you can then adjust the parameters output levels and output assignments. Individual adjustments for the head and rim surface, the ambient, and the entire kit is displayed on the screen. As the manual points out, if you think about the drum hierarchy at an overall effect level, the individual controls act as sound levels while the output assignment act as return levels. By tweaking both, you can control your sound to a great degree.

Just like a real recording studio, the compressor, equalization, and special effects settings are found in the "Control Room" section of the kit. In the mixer settings, you have access to the relative volumes of each instrument in the kit, their stereo placement, output assignments, and group volume. The compressor/limiter has settings for threshold and compression ratio as well as attack, release and output levels. Hey, this works just like the real thing!

The EQ settings are really outstanding. Each input has its own individual EQ setting, and you can choose between peak, low shelf, and high shelf filters and make adjustments to the sound by adjusting the center or corner frequency, and the gain (0-15). While the FX section of the studio instrument is quite impressive, they affect the entire drum kit, but each individual instrument. However, you've got a great amount of control over how much of the instrument's sound is affected by the chosen special effect. The V-Drums have 28 available effects, and just like a stand-alone rack unit, the tweakable parameters change depending on the effect you've chosen.

The Sounds. V-Drums come with enough sounds to keep you busy for weeks, but if tweaking sounds is your game, then this kit is a dream come true. When you press the "Instrument" edit button, the screen takes you to the true land of V-Drums, where every parameter is at your command. The "List" function key takes you to a listing of every available sound, and there are plenty of them: 183 drums, 132 toms, and well, you get the idea. Sounds are divided between "V-Drums," drum sounds, and electronic sounds (from the Roland 888 and 909 machines). The instruments that aren't V-Drums instruments, such as cymbals and percussion voices, have limited editing options — only the pitch and the decay are adjustable. Sound from the 888 and 909 categories allow an analog interface that lets you see the tuning, the tone, and the decay. Other electronic drum and percussion sounds offer the ability to tweak the attack, tone, noise, decay, balance, and blend of the sound. Of the other sounds, the controls mimic a true analog drum machine.

But this model really shines when editing sounds that are included in the V-Drums category. To give you a sense of the editing choices, let's look at the parameters in Fig. 1 (and the ease of the editing layout) for a typical snare drum sound. Pretty damn impressive, no?

The Front Panel. The layout of the button, sliders, knobs, and displays is logical and well organized. The data input section consists of up/down, left/right control buttons and a large value wheel. Master volume con-
tools determine the mix-in level, the phone level, and the master output volume. In addition to the master knobs, there is a group fader section that controls the individual volumes of 64 kicks, 4 snares, hi-hats, others (either drum and percussion sounds or reverb), (melodic instruments such as keyboards and guitar) and click. The sequencing and editing sections of the front panel are also arranged in an ergonomic manner. Along with the large LCD display and the four function buttons, navigating around the TD-10 is a breeze. A few hours with the manual and you should have the user-interface portion of this kit pretty well under control.

The Sequencer: The sequencer on the TD-10 built is a four-track sequence with 32 on-screen patterns that allow you to record new patterns. 

The Digitech MD2M is a one-finger keyboard that will allow you to control not only your drum sound but also your guitar sound. 

In general, the TD-10 is an advanced "drum" pad and you'll be more than pleased with the results.

The Other Stuff: At any time, you can press the "Top" button, then press "F-4" and have access to help screens that may offer you quick tips about a specific feature, but may also have a "jump" mode that will instantly take you to that portion of the manual. For example, use the help index to call up "MD2M" and you can be taken directly to the MD7R settings. However, call up the help screen for "PMA-9" and you'll see the following text: "Try the PMA-9 for your new Roland Drum! Was this really necessary? Isn't there some other information that could have been added to the help screens instead of an advertisement? The click can be adjusted to perform a variety of meters (0-13 beats per bar) in a variety of ways (note values of 2, 4, 8, and 16). If you want neat numbers, you can ask the click to give you "cents" and specify numbers, the "snaps" triplets, or even sixteenths (1.61). If steering your instrument a bit loud seems a little odd, you can choose a variety of instrument settings to perform the click, including drums, wood blocks, triangles and ten 808 kick drums. If that isn't enough, you can assign an ambient level and an FX send level to the click, as well as determine the pan position and select the output as master or headphones output. Oh, you don't forget that the click volume has its own fade, right on the front panel.

Many of the drum kits come with presets that can be triggered by hitting the rim of a cymbal. By the way, several of the play-along patterns are a ton of fun! If you want to change that pad's position on a different one, it's very easy. You can select how the pattern can be played back in one of three ways: "keep" (plays the pattern over and over), "one shot" (plays the pattern a single time, then stops) and "tap" (each time you hit the pad, you hear the pattern played more-or-less). Think about this last option for a while and I'm sure you'll come up with some very interesting ideas: buds, tick, electric bass lines played with the bass drum pedal, and more. You can also assign two additional pads (located on the TD-10) to act as instrument/determines switches for patterns or drum kits.

You can select a different MIDI channel for each pad when you want to drive external emulated drums, but the pad will only fire one MIDI note simultaneously. The same note is sent for open, closed, and pedal hi-hat. The gate time for each individual pad can be adjusted between 0.1 and 8 seconds, but you can't specify individual MIDI channels for each pad. There is a "soft" setting available on the TD-10 so that you can merge the MIDI messages from the "MIDI-Out" port to the "MIDI-In" port. This is a nice feature if you wish to combine the V-Drums with another percussion controller.

You can take advantage of the V-Drums features of pressure sensitivity on the hi-hat, and position changes on the hi-hat drum and ride symbol when using the TD-10 as an external sound module for MIDI sequencers. The TD-10 is already set up to interpret...
The subtle changes from MIDI's continuous controller messages (those are messages similar to using a synthesizer's pedals and knobs to add expression or change values). The playing position on the snare drum head is determined by controller #16. Controller #17 determines the playing position on the ride cymbal, and controller #8 alters the hit-ahead pressure. If your sequencer is already using controllers #6, #16, and #17 for other functions, you can easily change the TD-10's assignments.

The TD-10 manual and control panel manual are clear, concise, and easy to read. It would be nice if there were more tutorials and examples of some of the more advanced features, but all of the basic information is here and easy to access. The back of the TD-10 manual contains extensive information about percussion kits, patterns and backing instruments, instrument lists, factory note-number settings, and MIDI implementation charts and menus. There is also a compact glossary and an index.

So, What Is It Really All About? I had a hard time getting a handle on the kit. Sure, it's big fun to play. The sounds are outstanding, the feel of the instrument is the best on the market, and the V-Drum editing parameters are totally unique to the industry. This kit is both new and revolutionary that it's difficult to compare with other electronic drum sets.

So why doesn't the kit allow for layering, stacking, or alternating sounds like other electronic kits? Why can't I program a cross-fade between different sounds? Why can't I specify a different MIDI channel for each pad? Where are my five-stage envelope controls?

Why are some pretty basic features missing on this kit? I think I might know the answer.

Previously, manufacturers bemoaned that their electronic drum kits couldn't replace acoustic drums, but players didn't buy the concept. Most preferred the idea of electronic drums as a tool, as an additional complement to acoustic drums, or as a brand new instrument that just happened to be hit with sticks. But very few players actually sold their acoustic drums to go 100 percent electronic.

I believe that Roland had a new vision — this kit can actually substitute for acoustic drums in many settings. Some "basic features" are missing because they just aren't necessary anymore. With positional sensing of the ride cymbal, the pad doesn't need to cross-fade between four or five different samples to create a realistic timbre. With so many outstanding sounds on-board the TD-10, why would you even think about firming an external sound module? If this kit is the equivalent of an acoustic kit, it may not need the tricks and special features of layering or alternating sounds. Do you really need a five-stage envelope if you can custom-build your sound by selecting an instrument's size, shell type, brand material, muffling, studio environment, microphone type and position and equalization and effects?

This is the new standard for electronic drum kits in the future? I think so, and hope to. Play it for an hour, and I know you'll agree that this is the next step in the evolutionary chain.