

SoundLab Nº.4

Roland RT-Kit-1 Acoustic Drum Trigger Kit And TMC-6 Trigger MIDI Converter

Details, Details

by Norman Weinberg

Model: RT-Kit 1 Acoustic Drum Trigger Kit

Price: \$335

Contents: One RT-7K kick trigger, one RT-5S snare trigger, three RT-3T tom triggers

Model: TMC-6 Trigger MIDI Converter

Price: \$295

Trigger Inputs: 7 (five mono, one stereo)

Memory Locations: 12



RT-7K picks up kicks



RT-5S strengthens snares

Getting Trigger Happy

How do you turn your acoustics into electronics? Triggers! By attaching acoustic drum triggers to your kit, you can access the expanded sonic palette of electronic drums. Here's how it works. Triggers use different types of technologies (primarily piezo transducers) to react to the vibrations of a struck surface. Depending on the strength of the stroke, an electrical spike is sent down a 1/4" cable. In order to turn this signal into sound, the trigger's cable must be connected to either a drum brain or a trigger-to-MIDI converter. If connected to an input on a drum brain, the spike will cause a sound to fire just as if you had connected an electronic pad. If connected to a trigger-to-MIDI converter, the MIDI output of the TMC can be routed to a computer, a synth, a sampler, or any other type of electronic music system. In this double review, we'll take a look at the Roland RT-Kit-1 Acoustic Drum Trigger Kit and their TMC-6 Trigger MIDI Converter.

THE TRIGGER KIT. The RT-Kit-1 package contains five triggers: the RT-7K kick trigger, the RT-5S snare trigger, and three RT-3T tom triggers, all packed in a custom case with fitted foam padding. The snare and bass drum triggers are built with a sensor technology that is based on those found inside their mesh-head electronic pads. The three tom triggers use the more traditional piezo transducer element. All triggers are in a housing constructed from die-cast metal.



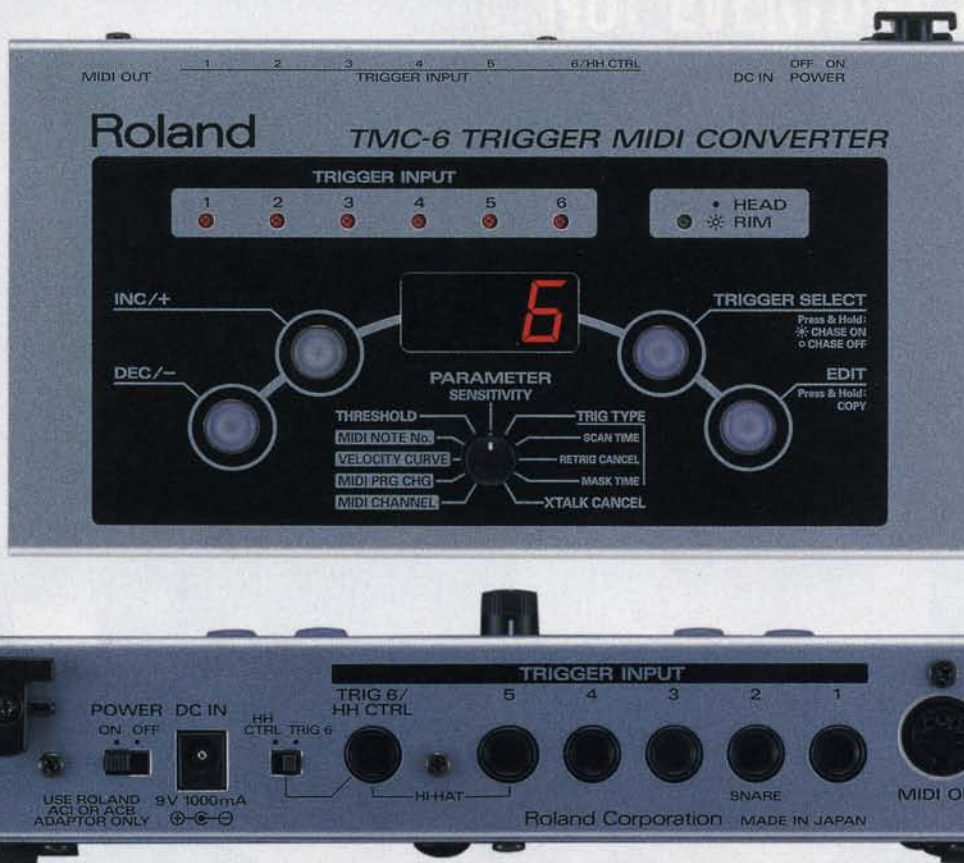
RT-3T tracks toms

The solid metal housing should protect the trigger's delicate electronics from a direct strike by even the heaviest hitter.

All triggers mount directly on your instruments' counterhoops and are firmly attached by tightening a round thumb knob. This is a very intelligent and secure mounting system – plenty solid, and you won't need to mess with double-sided tape to attach the triggers to your drums. The snare and bass drum triggers have an adjustment

It's different to judge the operation of triggers on acoustic instruments – there are so many variables, offering a verdict is highly personal. That said, I found the triggers to work just fine with my drums. Some minor experimentation with the RT-Kit-1 triggers, the instruments, and the trigger settings on your brain should allow you to arrive at a system that will meet all your needs. If you're having problems, here are some tips to make your triggering more accurate: slightly mute

understand and operate. The unit's center features a three-character LED display, and while it's only three characters, that's enough to show what you need to know in order to interact with the machine. To the left of the display are increment and decrement buttons; trigger select and edit buttons are to the display's right. At the top of the unit, a series of six indicator lights blink when their corresponding pads are struck, or stay lit during editing to indicate that a particular



Both the front panel (above) and the rear input bay (below) are as straightforward as they could be

to fine-tune the sensor pressure against the head. The foam sensor is designed to “ride” on top of the head, so there is only minimal effect on the drum's acoustic tonal quality.

The snare trigger also has a rim level control (that's correct, the snare trigger will read signals from the head and the rim). This trigger uses the foam sensor to read vibrations from the head and a conventional piezo to read signals from the rim. In order to have the trigger operate in this dual mode, you'll need to use a stereo cable to connect the output from the trigger to your device. And, of course, your device must be able to accept stereo inputs to respond to both the head and the rim. If you're using an older unit, you could use a y-adaptor to create two mono-signals.

the head, use a tone ring or a Pinstripe-type head, adjust your tuning to minimize sympathetic vibrations between drums, be sure your drums aren't touching each other, don't place cymbals directly over your drums (cymbal vibrations may cause the drum to trigger), and finally, take your time and have patience when adjusting the parameters of your drum brain or trigger-to-MIDI converter. Making these subtle adjustments is an art, not a science.

THE TMC-6. Roland's TMC-6 is a six-input trigger-to-MIDI converter that's not much bigger than a VHS tape. While not overly sophisticated, the electronics inside the box offer up the basic elements of acoustic triggering.

The front panel of the TMC-6 is easy to

trigger is being programmed. At the bottom of the box is a parameter selection knob.

The back of the unit is clean and simple. It contains the DC input (power brick), an off/on switch, six input jacks, a selection switch for input 6, and a single MIDI-Out port.

INPUT REALITIES. The TMC-6's inputs are divided into two groups: trigger inputs 1-5 and trigger input 6/HH cymbal. Of the first five inputs, only input 2 is “stereo” – capable of reading a pad or trigger that can send unique signals from the head and the rim over a single cable. In order to use a dual-zone pad, you'll need to connect a stereo cable from the pad to input 2. Inputs 1, 3, 4, and 5 are mono inputs. Input 6 has a switch that allows the input to function as

either another mono trigger input or as an input for an electronic hi-hat pedal. You can also substitute footswitches for triggers to move up and down between the 12 available user presets, or playback patterns and songs.

If you want to use dual-zone pads in addition to input two, you'll have to use Roland's PCS-31 cable, or equivalent, to connect the pad to two separate inputs (i.e., inputs 3 and 4). Likewise, you could connect a three-zone pad, such as Roland's CY-15R, but it's going to cost you three of the TMC-6's inputs.

PROGRAMMING PARAMETERS. We found programming to be a piece of cake. Use the parameter knob to select an editing topic, and then use the increment or decrement buttons to change the value. Each of the inputs on the TMC-6 can transmit any single MIDI-note number over any of the 16 possible MIDI channels. Each pad can also call up a particular program change message when the kit is called up into memory. If you don't want to send a program change, you can program a pad to send start and stop commands, continue and stop commands, or a command that returns a sequencer to the first measure of a

pattern. Each pad can select between eight different velocity curves to better fit your individual playing style. These include linear, spline, two exponential, two logarithmic, and two "loud" curves. Additionally, the machine has 16 fixed velocity level settings.

While the TMC-6's MIDI controls are very basic (no stacking, no alternating, and no gate adjustments), everything you need for trouble-free drum triggering is included. Each pad can be programmed for: *threshold* (0-15) – the minimum signal strength required to fire a sound; *sensitivity* (1-16) – how striking force relates to MIDI velocity; *trigger type* (20 types) – including everything from drum pads, cymbal pads, acoustic triggers, footswitches, and even microphones; *scan time* (0-4.0 ms in increments of .1 ms) – the amount of time the machine waits before reading a trigger spike; *retrigger cancel* (1-16) – preventing retriggering on acoustic drums and some pads; *mask time* (0-64 ms in increments of 4 ms) – the minimum amount of time between strokes; and *crosstalk cancel* (off, 20-80 adjustable in increments of 5) – controlling cross vibration signals between pads. When

setting the sensitivity and the scan time, the LED display shows the output velocity on a six-level scale, offering a visual aid during programming.

When using the hi-hat control in conjunction with a pad connected to input 5, you can control four different sounds: pad without pedal (open), pad with pedal (closed), pedal alone (foot close), and foot open (foot splash). The TMC-6 has two different hi-hat formats to work with a variety of drum brains and sound modules. One format sends just the MIDI note numbers, the other sends note numbers along with control change messages. When used as a controller, you can program the pedal to send channel aftertouch, pitch bend up, or pitch bend down.

THE VERDICT. Both units are well made and easy to use. Combining the RT-Kit 1 with the TMC-6 is a quick and easy way to electrify your acoustic kit. Using the TMC-6 alone is an inexpensive way to add additional pads to your current electronic kit. In fact, if you're interested in a trigger-to-MIDI converter for any reason, I believe that the TMC-6 is the only unit still in production. 🖐

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