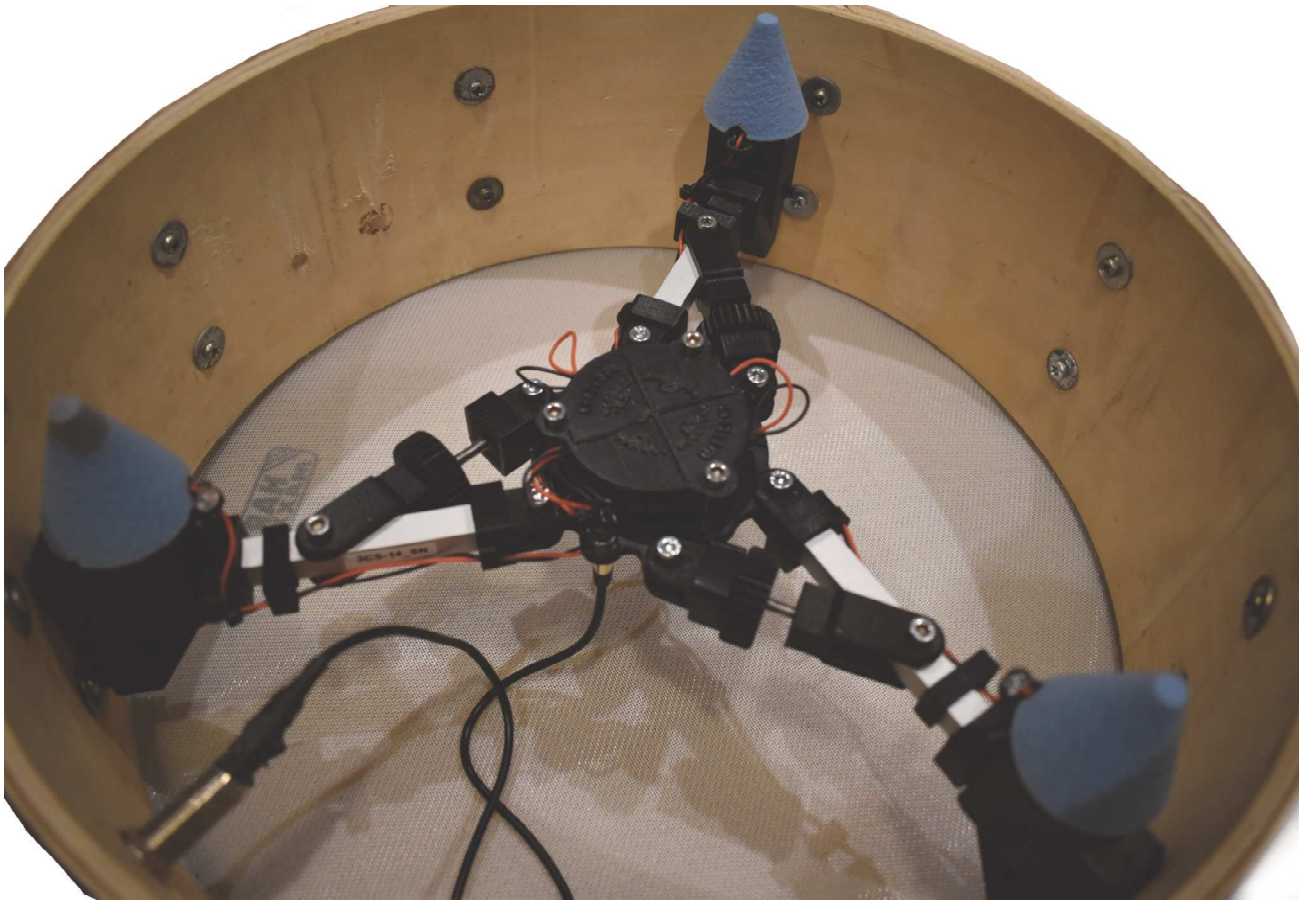

Gear Drum 3CS-14_SN

We were fortunate to get access to a prototype of Gear Drum's multi-sensor kit which will soon be available.

Again, this system is no doubt inspired by Alesis, ATV and Roland and their move to multiple sensors as a way of avoiding the hotspotting associated with central sensors.

The kit, like the IRIS, consists of a platform with three tensioned arms, each of which holds a piezo and cone.

Like the IRIS, this is a drop-in no-screw solution, but with the 3CS, it is important to get the cone height correct right off as there is no way of adjusting it once it's positioned. (Finetuning may be available in future versions).

This kit was supplied with the integrated external jack assembly described previously – again, easy to install and it looks good on the drum.

Performance-wise, this model sacrifices positional sensing in favour of even triggering which is sometimes hard to achieve, especially at the extremities of larger drums.

On the mimicPRO, the three-sensor 3CS was eminently playable with stock R-PD-125 and R-PD-128 presets, with the 125 performing slightly better for rim triggering. In both settings; however, some rim boost was required in the zone adjustments. The


--GEAR--

A bit on the side

There's been a move to side-mounted trigger kits lately, partly thanks to the growing number of 2box modules and also due to growing discontent with the hot spots that generally accompany centre-mounted sensors. **digitalDrummer** recently received two more samples which we put through their paces.

The trigger: Go Edrum dual-zone trigger kit ($20)
Form: Edge-mounted I-bracket
Performance: The kit comes neatly packed in a plastic jar. Unfortunately, it doesn't come with instructions and if you hunt online, you'll only find a few pictures to guide you.
I had to connect the parts to a module to work out which was the head piezo (for future reference, it's the one with the longer tail), before starting the very simple build. The hardest part was peeling the backing off the double-sided tape.
Installation consists of sandwiching the piezo between two layers of foam, attaching that to the bracket, removing a lug screw and positioning. The rim trigger is also easily mounted, and the assembly comes with a barrel jack that's easy enough to pop through an airhole when the grommet is removed. The components are well finished, and they even provide isolators for mounting on metal shells and an o-shaped adhesive disk and protective cover for the rim trigger.
Excellent triggering was obtained on the TD-30 in PAD2 setting, with good dynamics, even triggering right around the head and good rim response. The only downside is a fairly large hot spot (4 cm x 4 cm), but it is right next to the rim and can be positioned in a seldom-played location.
Threshold had to be reduced for 2box's Pad12 settings, but once that was dialed in, triggering around the head was even, with the exception of the sensor area, which was significantly hotter. Rim triggering was great in stock setting.
The Roland TM-2 showed its versatility, with almost no adjustment required to produce good response across the head. The module didn't even peak when the sensor was struck directly.
This trigger took quite a bit of tweaking for the Pearl RedBox. A Lug curve was required to get decent responsiveness and the rim sensitivity had to be maxed out on the module. But once dialed in, triggering was even and there was no hotspot.
Triggering with the Yamaha DTX700 was marginal due to the limited tweaking capabilities of the module.
Sensitivity on the Alesis DM Dock had to be boosted quite a bit for this trigger, resulting in a pronounced hot spot above the sensor pad. Other than that, good even responses were possible with this combination.
On our oldest module, the Roland TD-6V, triggering was excellent in stock PD-125 setting – luckily, because there aren't a lot of options.
What we liked: Easy to install, neat finish and reasonable pricing.
What we didn't like: Larger trigger surface which increases the risk of hot spots.

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The trigger: Stealth Side Mount Internal Drum Conversion Kit ($65)
Form: Edge-mounted I-bracket
Performance: The components are all packed in bubble wrap and clearly identified and comprehensive online instructions provide step-by-step guidance.
The kit is easy to install, with the piezo already attached to the sensor foam. All that's required is removing one or two lug screws, mounting the I-bracket, sticking on the sensor column, attaching the rim sensor and inserting the Neutric barrel jack in the shell. And if you mess up, the wires are joined using quick connectors that are easy to unplug.
There's a generous amount of cabling which should accommodate the largest of drums, and a couple of cable ties to bind up any excess.
Interestingly, these triggers use 20 mm head piezos – similar to those found on external triggers and the new generation of internal kits. Again, the hardest part is removing the backing from the mounting tape, but Jman includes a picture to aid that as well.
The kit produced excellent triggering in PAD2 mode on the TD-30, with even response across the head, good dynamics and accurate rim triggering. You have to hit right on the piezo to get hot-spotting. With 2box's Pad12 settings, even triggering around the head was easy to achieve. Rim triggering needed a minor reduction. Overall, triggering on the 2box was as good as anything out there – and the hot spot was small and easily avoided.
Good triggering was easy to achieve in almost any trigger setting on the Roland TM-2 with sensitivity dialed down a tad. There was no hotspotting, regardless of where the head was struck.
The Pearl RedBox responded reasonably well to this trigger, although the rim triggering needed a boost. There was no peaking, even when the sensor was struck directly.
Triggering with the Yamaha DTX700 was marginal due to the limited tweaking capabilities of the module.
Responses on the Alesis DM dock were easy to dial in, with a bit of sensitivity reduction on the head and a boost on the rim. Even triggering was achieved around the head, with almost no peaking directly over the piezo.
Our oldest module, the Roland TD-6V, took a lot of dialing in because there aren't many trigger choices. To get good responsiveness, I had to tweak almost every parameter – from scan time to retrigger cancel.
What we liked: Easy to install, small footprint, excellent instructions, generous cabling to accommodate the biggest of shells, quality Neutric barrel jack and optional rim silencer.
What we didn't like: The kit looks less engineered than some of its competitors, but since it's hidden under the mesh and it does the job, that's not a big deal.

How we tested

The kit was fitted to a 14" shell according to the instructions. We used a Hart Dynamics Maxxum head and connected the drum to a Roland TD-30, TM-2 and TD-6V; 2box, Pearl RedBox and Yamaha DTX700 modules and to an Alesis DM Dock.

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trigger was sensitive enough for the lightest ghost notes and coped equally well with hard hits.

While the PD125 and PD128 presets on the Roland TD-30 produced good triggering response, switching to the utility PAD2 setting improved the overall performance across all aspects – overall sensitivity and responsiveness, dynamics and triggering. Absolutely no refinements were needed and, indeed, any alterations to threshold, sensitivity or head/rim balance actually hindered rather than enhanced performance.

The relatively new 2box DrumIt Three again took a bit of work to dial in because of the vagueness of its presets. Selecting the PadPP (piezo/piezo) preset, quite a lot of tweaking was needed: lowering the threshold below -40 and the gain for both the head and rim, raising the scan time to avoid double triggering and moving away from the default Norm curve to Pos1. However, once dialled in, this trigger performed well – smooth transitions from low to high impacts, even playing around the entire surface of the drum and excellent head/rim separation.

The Roland TD-17 was very accommodating, and the snare triggered well in all the likely presets – PD125X, PD128 as well as the side-trigger PDX12 preset. However, in all cases, the threshold needed to be dropped slightly as sensitivity dropped off noticeably towards the edge of the head in stock settings.

The Yamaha DTX 502 needed no tweaking of the stock dual-piezo preset to produce a wide dynamic range across both the head and rim.

With limited trigger presets, it was not possible to get dual-zone triggering on the older Yamaha DTX 700 on the snare input, so the test was restricted to head only. Performance as a single-zone drum was acceptable.

Paired with the ATV aD5 module, the IRS-14 kit was hard to fault. It worked well with most drum presets and shone with the ATV AD-S13 setting – with a slight rim boost. Sensitivity across the whole surface was impressive, as was the dynamic range.

The score:

Price: €140

Ease of construction: 4.5

Non-invasiveness: 4 (air vent grommet needs removal)

Performance: 4.8

How we tested:

As in our previous tests, the trigger was installed according to the manufacturer's instructions into a 14" acoustic shell. This size was chosen in the wake of our external trigger review because it sorts the men from the boys.

The converted drum was tested on the snare input of a range of modules – Pearl mimicPro, ATV aD5, Roland TD-30 and TD-17, Yamaha DTX 700 and 502 and a 2box DrumIt Three. During testing, we started with the most appropriate preset and adjusted the settings for optimal performance.

Our digitalDrummer scorecard measures a number of criteria and, in each case, the top score is five and the worst is awarded one point. For ease of construction, five points means easily done without tools or craft skills; four indicates that some tools are required; three implies the need for removal and or replacement of some drum parts (other than heads), two indicates the need for drilling or soldering and one connotes the need for drilling/part replacement and soldering. The performance score is an average across the modules on which the trigger was tested.