

# Alesis Technology Note

## Trigger IO Information about Trigger Types

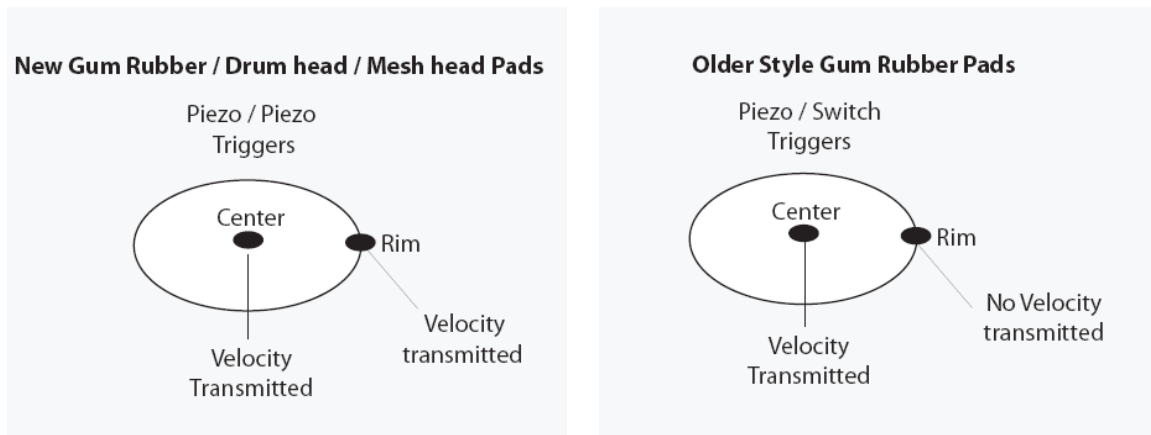
Here's a basic explanation about the difference between various trigger types.

The basics- How the pads work

Piezo pickups are like microphones. They transmit the acoustic information of the pad being struck into electrical impulses. Piezo's are good sound transducers, however they are susceptible to picking up other pads being struck (this is called Crosstalk.) Piezo pickups are embedded into the drum pad and the trigger information is converted into MIDI signals in the drum module (DM5 and Trigger IO.)

Some drum pads use switches on the edges which send out impulses that are converted into MIDI information. However this information doesn't have the ability to be velocity sensitive like Piezo's. Older drum kits like the Roland TD-7 and some current Roland Pads have switches as well (Roland PD-9.) While this can eliminate Crosstalk issues it does limit the functionality of the trigger. The majority of professional drum pads use Piezo triggers on both zones because of the limitation of switch triggers.

### *Dual Zone Pads*

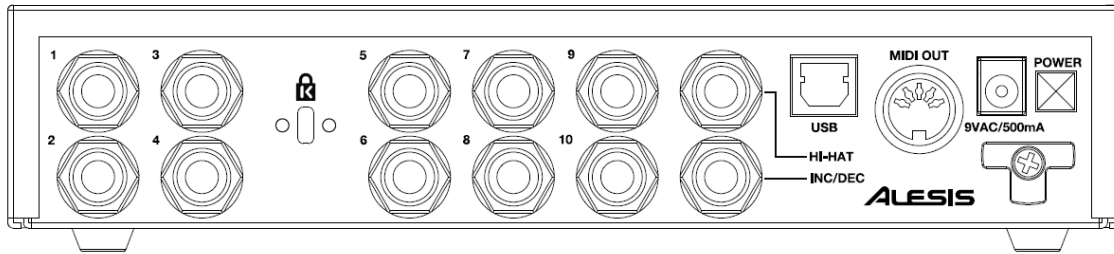


How the Trigger IO works

The Trigger IO is designed primarily to use Piezo trigger inputs on both zones since this works better for the user. We also have some very sophisticated Crosstalk adjustments on the module to make to Piezo's work on one trigger pad.

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The trigger IO's inputs are TRS (tip ring sleeve.) This means you can send two triggers (dual zone) to each input. All of the inputs except for input #4 are design for Piezo/Piezo trigger inputs. Electrically you can have only one or the other. We choose to work with the newer/better type of triggers for dual zone control. If you plug in an older drum pad with a piezo/switch configuration the center zone will work fine, however the edge switch trigger won't work unless you plug it into input #4.



Note: Some electronic cymbal triggers have a switch for a bell trigger. For this we made input #4 accept Piezo/Switch inputs so these cymbals will work. This would apply to Pintech and Roland electronic cymbals.

Just to confuse you more, our inputs will work with most electronic cymbals that have a switch mounted underside the cymbal the sends a message to choke a sound. This replicates the effect that you get when you hit a crash cymbal and then grab the edge. This basically shuts off the sound on a module or software.

We are constantly updating our compatibility information for the Trigger IO with various manufacturers' pads. This information is published on our website.