

# SYNTH HACKS #15

## MINI MIDI HACKS

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Around the time MIDI became old enough to order a beer, I asked co-inventor Dave Smith why he thought the format was so successful. “I always challenge people to come up with anything else that’s twenty years old and still in version 1.0,” he laughed. “I also challenge them to find something that’s in every home studio, every professional studio, movie studio, and stage—all around the world—and for which something built twenty years ago will work with something that was built yesterday.”



MIDI might be now over forty (and rolling out version 2.0), but here are five hardware hacks that still work well.

**MIDI Gear Light:** Got an unused MIDI Out or Thru jack? Plug an LED between pins 2 and 4 to light it up. Connect to pins 4 and 5 instead to make a data detector. The LED’s long leg goes to pin 4 (Figure 1).

**MIDI Kill Switch:** Crack open a MIDI cable, cut the wire from pin 5, and solder on a switch. (Or use two MIDI jacks.) Flipping the switch interrupts data to downstream devices. That’s a quick way to toggle a layered pad, disconnect modules that are always in omni mode, and prevent MIDI Start commands from triggering external sequencers. Just be sure you aren’t holding any notes before flipping the switch or they’ll miss the Note Off command and sustain forever! I built a kill switch into a monster toy and added LEDs to show the status (Figure 2).



Fig. 3  
Back-to-back stereo Y-cords make the world’s simplest TRS-MIDI A/B converter. Simply flip the RCA connections to swap the format.

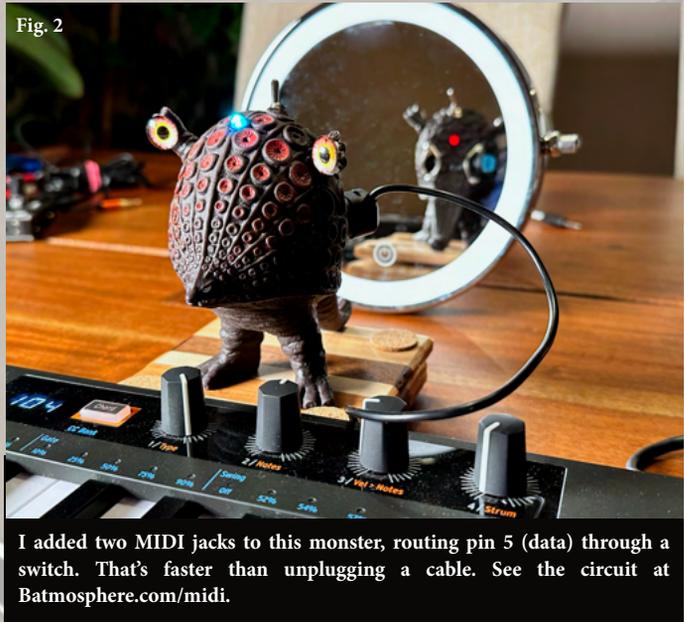


Fig. 2  
I added two MIDI jacks to this monster, routing pin 5 (data) through a switch. That’s faster than unplugging a cable. See the circuit at [Batmosphere.com/midi](http://Batmosphere.com/midi).

**TRS-MIDI Converter:** One hiccup in MIDI history is when manufacturers replaced the bulky DIN socket with a TRS miniphone jack before agreeing whether the tip or ring should carry the data. The MIDI Manufacturers Association eventually chose TRS-A (tip) format, but there’s a good chance any two pieces of gear won’t communicate. An easy fix is to connect two TRS-to-RCA Y-cables. If you play a note and your module doesn’t respond, simply flip



Fig. 4  
Although the MIDI spec proclaims, “One output shall drive one and only one input,” a headphone mult can work as a MIDI splitter to layer multiple synths.

the RCA plugs so red goes to white or vice-versa (Figure 3).

**Mini MIDI Splitter:** Routing a TRS-MIDI signal through a headphone mult (Figure 4) is an easy way to control multiple sound modules that don’t have MIDI Thru ports. It’s a gross violation of the MIDI spec, but I’ve used it to play up to four synths in parallel from a single controller.

**Simple Switcher:** For more control, an audio output switcher (Figure 5) lets you redirect TRS-MIDI to one of several connected synths with a quick button push, and I discovered I could mash multiple buttons to layer the synths. Cheers to Dave Smith and the MIDI designers for giving us such a versatile technology!

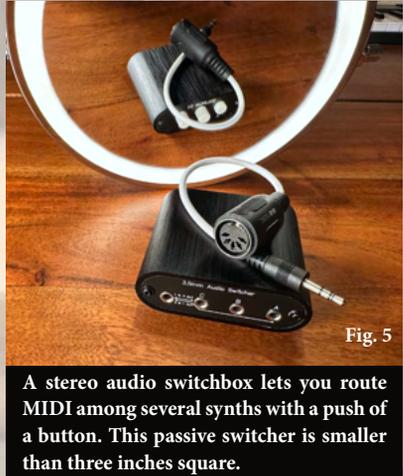


Fig. 5  
A stereo audio switchbox lets you route MIDI among several synths with a push of a button. This passive switcher is smaller than three inches square.