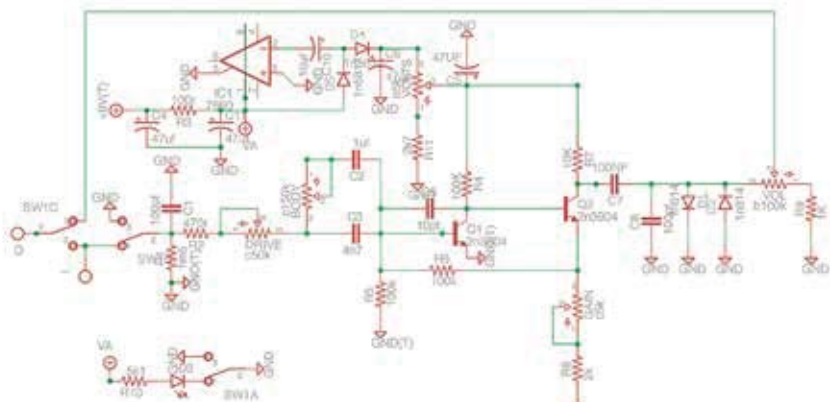




BY LAURIE LAMOUNTAIN

**T**here's a scene in the fabulous documentary *It Might Get Loud* in which The Edge demonstrates how he summons that trademark U2 sound from his guitar by using a foot pedal to enhance the tone. He then strums the few simple chords that he just played without the pedal. It's like driving an Oldsmobile after you've just driven a Ferrari.

Foot pedals, also known as effects pedals, are electronic or digital devices that are used with electric guitars to alter the sound in various ways. Common effects include boost, overdrive, distortion, fuzz, reverb, phaser, tremolo, etc. The distinctions in each of these categories could be an article in itself, but the birth of effects and pedals is surprisingly simple.



**"IF YOU USE THE COMPUTER FOR GOOD, IT'S UNBELIEVABLE WHAT YOU CAN ACCOMPLISH."**

GEOF HANCOCK

The first recorded effect of fuzz was heard on Marty Robbins' 1960 hit "Don't Worry." A faulty preamp in the mixing console created a fuzzy vibration that sparked a sonic revolution. This happy accident led to Glenn Snoddy replicating the sound in a little box that he presented as a prototype to Gibson, which developed it into the Maestro Fuzz-Tone FZ-1—the first commercially-available fuzz pedal. Despite Gibson's efforts to boost sales, the Fuzz-Tone performed poorly in its first five years. That changed dramatically when Keith Richards used the Maestro FZ-1 on his iconic guitar riff on the Rolling Stones' hit single "(I Can't Get No) Satisfaction" in 1965. According to Richards, the riff was inserted as a placeholder for a section originally intended for horns. Due to this happy accident, the sonic revolution suddenly got much noisier and the list of effects pedals much longer.

Geof Hancock, who with his family owns Hancock Family Farm and has created his own brand of guitar pedals called Farm Pedals, likens them to paints in a painter's palette. He first got the idea for making them from Micah Blue Smaldone, a Maine musician who had built a guitar amplifier out of an old Hammond Organ tube chassis.

Over the years, Geof played guitar and bought a pedal or two along the way, but it wasn't until he and his family moved from Porter to Casco—where they finally had reliable power and internet—that he acted on the idea Smaldone had planted in his head.

"I went on the internet, because as it turns out the internet is amazing, and I found a tube organ chassis, got the original schematic for it and converted it from an organ amplifier into a guitar amplifier. And I didn't kill myself, which it turns out when you're playing with amps, I mean, I was really careful, but there's some serious plate voltage in there," Geof recalls of his initiation into amplification.

Once he built an amp, he figured he could build his own pedals. He did some research and found there were kits you could buy online so he purchased a few. From there, he bought a \$20 soldering iron from Radio Shack in Windham and put the kits together. That was in the fall of 2015. He had just listed his first pedal on Reverb.com (think eBay for musical instruments) and was in the process of listing the second one when the first one sold.

"Which may be the worst thing that ever happened because there was this very false sense of 'Look, I can do it! This is a thing!!'"

He adds a bit derisively, “Yeah, which is not a thing.”

Just about everything Geof has learned about making pedals he acquired by watching YouTube. After assembling the kits, he moved on to strip board, which he describes as a blank template that you can manipulate, drop in your components and, in his words, hope for the best. In the beginning, he worked almost exclusively with cloning pedals, which are what their name implies—classic pedal circuitry that you copy. Once he got the hang of cloning with strip board and understanding the schematics, he began delving deeper on the internet.

“I was reading everything I could get my hands on through the internet and trying to wrap my head around, like, how do you manipulate transistors, what do different levels of capacitance do to sound waves? Things like that. I would just try to figure this stuff out. How can you modify wave forms or manipulate voltages? Once I started cloning pedals using this blank template strip board stuff and seeing the schematics on the line, everything slowly went from two-dimensional black-and-white to more and more three-dimensional and technicolor.”

OK, so he’s a bit of a geek.

Despite that, Geof is quick to point out that he didn’t go from making one kit to building a digital processor. His design and efficiency have evolved over time. After about a year of doing “the strip board thing,” he got in touch with a community of small board builders. Brian, from San Francisco Bay Area-based Spruce Effects, turned him on to Eagle software for electronic engineering. Through Eagle, he was able to build his own schematics (the electrical circuit blueprint including voltage inputs, knobs, switches, capacitors, transistors, diodes, chips, etc.) and convert it to a board file that can be manufactured according to his specifications and quantities.

“Once you’re into the land of circuit boards, you’re cooking with gas,” says Geof.

The Mountain, one of his more popular fuzz pedals, was preceded by the Evolution Fuzz, with one or two versions in between. He points out that most people wouldn’t be able to tell the difference between the two, but the nuances are not lost on musicians. To whit, a recent podcast he took part in devoted forty-five minutes to analyzing the nuances of fuzz.

But it was Hammond’s Organs, a distortion pedal, that was his big breakthrough. Now in its fifteenth version, it is one of his







**A SUBSOILER IS A PIECE OF FARM MACHINERY THAT IS DRAGGED BEHIND A TRACTOR TO BREAKUP SUBSOIL COMPACTION . . . THE TINES DIVE FEET UNDERGROUND, RIPPING UP ANY HARDPAN LAYERS IN THE GROWING ZONES . . . IT'S AN APOCALYPSE MACHINE.**

first near-to-unique strip board designs. The first generation actually contained salvaged parts from an old Hammond Organ. Later generations do not, but the circuitry remains the same. He knows of a musician in Brooklyn who is amassing a multi-generational Hammond's Organ collection. And even though he doesn't listen to a lot of "heavy-duty, doomy Rock" and is more inclined to modulation-based effects, like phasing, tremolo and delay, it turns out musicians of that genre love his stuff. Last year, his biggest seller was the Subsoiler, a very dense, heavy fuzz pedal that had the good fortune to be featured by a national outlet.

He feels fortunate that he has national advocates who give Farm Pedals an advantage in a fairly saturated and somewhat mercurial market. The last couple of years have also brought growth through collaboration with pedal builders in California and Mississippi. He keeps connected

with thousands of others who share this obsession with tone through an app on his phone. It balances out life on the farm. He can think about schematics and board design while driving a tractor through the fields in the growing season and spend the fallow months turning them into inventory. His goal for this year is 450 to 500 pedals. Given that it's pretty much just Geof, that's an ambitious goal for a farmer to add to his already full plate, but he points out that there's a symbiotic relationship between the two businesses that makes it work. Farming the land is very physical outdoor work and creating schematics in the land of circuit boards is very cerebral studio work that he finds "wildly problem-solving."

When he started three years ago, he was making pedals one at a time and spray painting and hand stamping the enclosures. He still hand stamps most of the enclosures but purchases them already powder coated.



His twin daughters occasionally help with assembly and his wife Gina makes quilted, organic cotton guitar straps with vegan leather strap ends. It's a family affair that began as justification for buying guitar gear and has grown into a business that increasingly contributes to Hancock Family Farm. He's not entirely sure where Farm Pedals is headed, but one thing is sure—it's no longer a hobby. And as Geof points out, unlike vegetables, the product doesn't go bad. 🌱

Farm Pedals can be found at [farmpedals.com](http://farmpedals.com) and at [reverb.com/shop/farm-pedals](http://reverb.com/shop/farm-pedals).