

Guitar Amp Modeler MIDI

Toggle Switch

A project that Changes Between Two Different Guitar Models in an Guitar Amp Modeler

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Introduction

Being the 'utility' guitar player in a rock-and-roll band many times requires me to switch between two totally different guitar setups. I accomplish this using an Amp Modeler, in my case a Line 6 POD XT® pictured below.



MIDI Toggle Footswitch



I wanted to have one small foot switch with one button that I could quickly press to go from the original model to the second model, then press again to go back to the original model. Simple – one button – nothing to remember – just press to change & press again to change back – an indicator light to show 2nd model selected.

Why not just use traditional guitar foot pedals on a pedal board?

I could do this:



Source sweetwater.com

- OR -

I can add some setups to the POD and now I only need this:

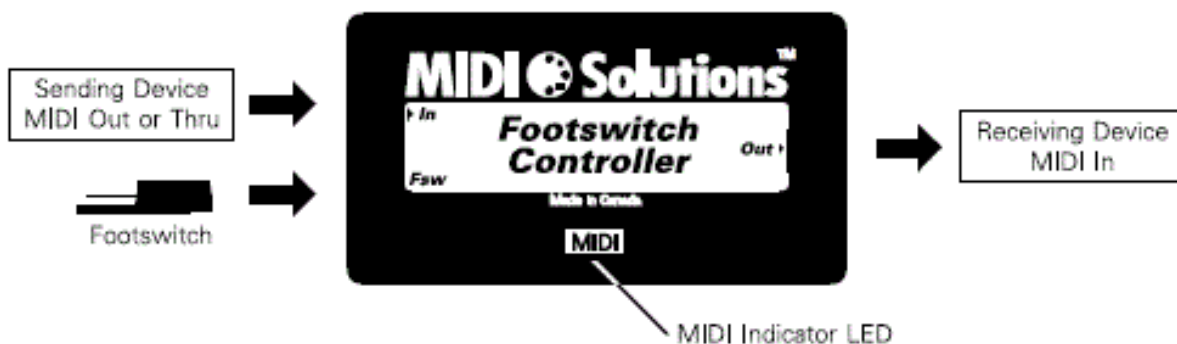


This makes it much quicker to switch between two totally different sounds that have multiple different effects.

The big problem I had switching between two different models was having to take my hand off the guitar and manually turn a knob back when I need to change to the next model, and then turn a knob back to go back to the original model. Line 6 makes a nice (but bulky) footswitch unit that has four switches that will switch between four different models at a time and it also a fairly large pedal for volume/effects (which I don't need). I consider it way too big, as I'm positioned at a keyboard with its own set of pedals. Also, having to select one of four different switches and then back to the original switch several seconds later is more complicated than I wanted.

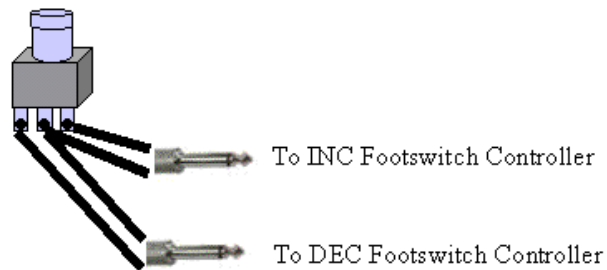
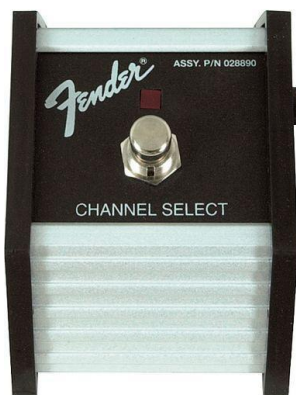
The Line 6 POD XT has a MIDI input that can be used to send a Program Control code, which changes the POD setting to the particular model that corresponds to the Program Control code sent. If I could arrange the two models used for a 2-guitar song next to each other, then I could just go up one Program Control code for the secondary guitar part and then go back down one Program Control code for the first guitar part.

Luckily, a company called MIDI Solutions™ makes a MIDI control that can be programmed to take one of several different types of Program Control actions, including increment or decrement. It takes as its input signal for the action a basic switch on using a ¼ inch phone jack to complete a circuit (see figure below).



Overall Design

I bought two Footswitch Controllers and programmed one to increment and one to decrement. I got the Footswitch Controllers to do the toggling I described by using a double-throw footswitch. In my case, I just used a small, single stompbox (a Fender™ - shown below) and replaced the "stomp" switch with a DPDT one. I use one pole of the switch as shown in the diagram to go between the INC and DEC, and I use the other pole of the switch to light an LED powered by a 9-volt battery when I'm in DEC mode, so I always know which model I'm using (first or second). I replaced the mono 1/4" phone jack in the stomp box with a stereo 1/4" phone jack and use a stereo-to-two-mono cable to connect the stomp box to the two Footswitch Controllers.



The next thing to do was to merge the MIDI outs of the two MIDI footswitch boxes and send to the MIDI in of the POD XT. The MIDI Solutions Merger™ merges all MIDI messages appearing at its 2 MIDI inputs and sends the merged MIDI data stream to both of its MIDI outputs.

