SOUND LUTHIERS

Effect Pedals
Order of Operations

A good starting order, from guitar to amplifier, is:

Filter effects

- Phaser
- Wah pedal

These effects sweep a peak (wah) or notches (phaser) in the frequency response. By placing these before distortion effects, they vary the distortion intensity of the affected frequencies at the same time.

The original Vox and Cry-Baby wah pedals did not use a true bypass when off, and can load your guitar signal. If this is a problem for you, you might want to have the switch replaced with a true bypass.

Another way around the problem is to use a "buffer preamp" before the wah, which can be any effect with electronic switching, turned off. If you use a phaser as well, plug that in first, and it will happily drive the wah pedal.

Compressor

Even though many players suggest compression should be first, there is benefit in placing it after filter effects. Filter effects can reduce volume at some settings (eg heel down on the wah pedal, notches in the middle frequencies from a phaser, etc), so placing a compressor after these effects can even out volume changes.

Overdrive/Distortion

- Stomp-box effects
- or your pre-amplifier drive channels

Placing overdrive after the filters gives them a more natural sound, like placing your wah pedal before a heavily overdriven amplifier. Using the filter effects after overdrive gives them a much stronger, more synth-like sound.

You would not normally need to use heavy compression and heavy overdrive together.

There can be merit in using light EQ before the overdrives (used only when the overdrive is on); this gives you the ability to change the character of

overdrive. For example, boosting the highs before overdrive, but cutting highs after overdrive (with the overdrive's tone control), will balance the highs overall, but cause them to be more heavily overdriven than the lower strings.

The overdrive could be the preamplifier in you amp. You can use this if your amplifier has an effects send and return, to allow you to use the remaining effects below. You may need to check the levels sent and expected by the send/return loop; often they are designed for line level only (eg rack equipment) and not the lower level stomp boxes.

Some send/return loops allow you to blend the return in an equal mix with the unaffected signal. This is great for not affecting your original signal, which can become quite unnatural if taken from the amp, processed by one or more analog-to-digital-to-analog conversions, then re-input. This increases the complexity though, when you want to remix chorus, flange, delay and reverb, all without any original component. Also, you may want some of these effects to be fed with inputs of a mix of original and other effects. These capabilities are often not provided in rack products.

Equalisers

- Graphic
- Parametric
- Speaker Simulators

These effects can be used on their own, to tailor solo or rhythm sounds, or with overdrives to give more control than you usually have with the overdrive tone control. For example, you could use heavy distortion, and use equalisation here to cut middle for a heavy sound, or tailor the highs for a creamy, yet "bitey" Santana sound, etc.

Before using a volume pedal to control my on-stage volume, I used a graphic equaliser stompbox to set a nice rhythm tone, with reduced level. I set my amp for the lead sound I wanted, and (although it sounds strange) turn the equaliser OFF to play a solo.

Speaker simulators are mostly preset, and highly tailored equalisers to emulate speaker box resonances, and microphone techniques. Some include other subtle effects, such as short delays, as well. Placement is not as crucial as you might think. For example, most recorded sounds use a microphone in front of a speaker box, then studio effects, such as equalisation, chorus, delay, etc applied afterwards.

On the other hand, when you play live, and are using a variety of effects through a stage power amp and speaker box, you might want to use the simulator here only for the purpose of feeding the mixing desk (who apply their own delay and reverb for the front mix). You could bypass the simulator on stage, and apply just enough delay/reverb to give a natural on-stage sound.

Pitch Effects

- Harmoniser
- Vibrato
- Pitch benders

Harmonisers in particular should be placed after overdrive. In the opposite order, sending several notes to the overdrive input causes strong inter-modulation distortion where additional, usually low, notes are added. These extra notes may have no relationship to the harmony you intend.

Modulation effects

- Flanger
- Chorus

These are effectively combined filter, delay and pitch effects. Because each of these effects is subtle (unless you set high resonance), many players prefer them after distortion, and prior to echo effects.

Level controllers

- Noise gate
- Limiter
- Volume pedal
- Tremolo
- Panning

Placing level effects before echo effects allows a natural echo sound. For example if you play a loud chord, but fade it out quickly with a volume pedal, you still want to hear the echo on what you played. The other way round, with echo first then a volume pedal, you would hear a loud chord with echo briefly, with both the main souund and the echo quickly cut out to silence. This sounds about as natural as turning the power off on your amp!

Echo Effects

- Delay

- Reverb

These effects are usually placed last to allow you to emulate the effect of using an amplifier in a "lively" room.