BOSS pedals with bad or good bypass

by **Pepe** » 01 Sep 2012, 11:52

I thought we could make a list of BOSS pedals that offer a superb bypass signal and those whose bypass signal is rather suboptimal.

I start with one pedal:

PS-3: bad bypass!

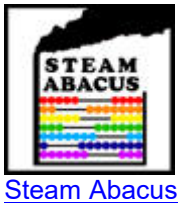
I had a live session with my dad two weeks ago and I put several pedals before my RC-20XL looper. Various instruments ran through the effects path and when I tried my stage piano, it sounded slightly distorted (peak clipping), no matter how much I reduced the volume. I tested which pedal could be the problem, since everything worked fine with a smaller effects setup. It turned out to be the PS-3. Any other pedal was fine, only the PS-3 affected the bypass signal in a very bad way. At least with piano. I was very surprised.

Pepe

Re: BOSS pedals with bad or good bypass

by **Steam Abacus** » 01 Sep 2012, 12:11

I'm surprised. I thought all Boss pedals had the same bypass/buffer circuit and I've never had a problem with them. Could it be an impedance mismatch?



Steam Abacus

Re: BOSS pedals with bad or good bypass

by **Pepe** » 01 Sep 2012, 12:12

I don't know. I had other effects in that setup as well: OC-3, SYB-3, DD-7, RV-5, GE-7 (ACA model), CE-3 (MIJ). Only the PS-3 made problems.

Pepe

Re: BOSS pedals with bad or good bypass

by **Arpeggiator** » 01 Sep 2012, 13:55

The SD-1 is renowned for its bad bypass signal.

Arpeggiator

Re: BOSS pedals with bad or good bypass

by **Laurie** » 01 Sep 2012, 14:27

> *Steam Abacus wrote:*
> *I'm surprised. I thought all Boss pedals had the same bypass/buffer circuit and I've never had a problem with them. Could it be an impedance mismatch?*

Some Boss pedals mess with the bypass signal pretty badly. Have a look at the schematic for the BF-2, for example. Not saying it's bad, just that there are a lot of components in the bypass signal path.

Laurie

Re: BOSS pedals with bad or good bypass

by **sclitheroe** » 01 Sep 2012, 16:28

I've read that the BD-2 has a lot going on in the bypass too, is that correct?

sclitheroe

Re: BOSS pedals with bad or good bypass

by **Laurie** » 01 Sep 2012, 17:05

Not much - couple of buffers. Nothing like the BF-2.

Laurie

Re: BOSS pedals with bad or good bypass

by **Dirk** » 01 Sep 2012, 18:23

Then why was that done? Won't all pedals work with the same bypass system by design?

I never have any problems with my BF-2, just wondering.

Dirk

Re: BOSS pedals with bad or good bypass

by **Laurie** » 01 Sep 2012, 20:19

No idea why they did it like that. Every Boss pedal has a different bypass system - some minor variations, some major.

Never really understood it myself. All my pedals have an identical true-bypass system. OK, it's a simpler system inherently, but I don't change circuit routing or even wire colours between pedals - every one is identical.

Laurie

Re: BOSS pedals with bad or good bypass

by **Zerksies** » 01 Sep 2012, 23:41

That really makes no sense why they would do that. I would figure just get it right the first time and never have to worry about it again. the tone area would be the pedal

Zerksies

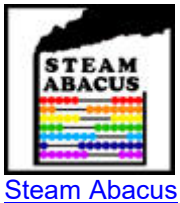
Re: BOSS pedals with bad or good bypass

by **Steam Abacus** » 02 Sep 2012, 11:44

So, back to the original question .... which ones are 'bad' and which 'good'?

I haven't noticed anything particularly problematic with any of my Boss pedals. Even my old BF-2.
And my PH-1r was *noticeably better* than the old Reagun Stereo Phaser it replaced.

I've heard about the SD-1 bleed-through but I've never owned one. Why is this circuit so bad?



Steam Abacus

Re: BOSS pedals with bad or good bypass

by **cctsim** » 06 Sep 2012, 19:29

CE2, CE3, CH1 and CE5 (both analog and digital version), BF2 and GE7, they all have a noise reduction system (pre- and de-emphasis) on the signal path all the time.

It might be a good idea if you use one of them in the signal chain but it would surely sound dull if you use more of them.

cctsim

Re: BOSS pedals with bad or good bypass

by **nathanscribe** » 06 Sep 2012, 19:39

Hmm, the pre- and de-emphasis is an interesting one - by boosting a certain band before effecting the signal with a noisy process like a BBD circuit, and then attenuating that same band on the output, the idea is that the original signal remains unaffected but the noise generated and added in by the effect is reduced. Whether that works probably depends on the tolerance of the components, the curve of the pre- and de-emphasis and how broad the noise is... but I'm not sure if they all use it within the bypassed signal chain, or how much difference it makes in practise to the dry element across several pedals.

nathanscribe

Re: BOSS pedals with bad or good bypass

by **cctsim** » 06 Sep 2012, 19:57

The ones I mentioned above all use this concept even in bypass mode.

The component tolerance invevitably introduces amplitude and phase distortion.

cctsim

Re: BOSS pedals with bad or good bypass

by **zentropa** » 06 Sep 2012, 22:26

Sweet, i have a CE-2, CE-5, BF-2, and GE-7 on my signal chain. No wonder i lose 20-30% volume when i run it on my effects loop :p

zentropa

Re: BOSS pedals with bad or good bypass

by **cctsim** » 08 Sep 2012, 01:18

The list also includes DC-2, DD-2, DD-3 (some versions), DM-2, DM-3, DSD-3, HF-2 and RV-3 that I forgot to mention.

cctsim