Pitch Shifters

by **Hexade** » 26 Jun 2017, 06:41

I know there is some info scattered on here about the various Boss PS/HR series but I really think they are a fairly unpopular, if a little complicated group of pedals so I thought it's be good to get a discussion going about certain pros/cons/applications of each, how they compare, and what you gain or lose with each new iteration. This is a series where each pedal is pretty radcally different features-wise from the other ones, so it's an interesting choice of which one works for the individual rather than which one is "better" (moreso than with other types of pedals). Obviously, only list stuff about the ones you have experience using. I really dig almost all of these pedals, and have found some cool applications for most of them, both live and for experimenting.

Please feel free to skip my long-winded post and just post your experience, or even just post about your particular favorite and least favorite and why. I'm especially curious about where people are putting these in their chains, what other effects seem to enhance/diminish the useability of these pedals, any tricks that you know or favorite settings, etc. Anywho, here are my observations:

PS-2:
Overall: It took me a long time to finally get one of these, and I'm glad I did. For a long time the PS-3 was the end all, be all of pitch shifters, and it still is my favorite. But there is something about the PS-2 that I really love. The lo-fi quality of mode 4 is quite beautiful, despite being a little bit of a pain to dial in properly. The delay is an astounding example of how much personality a digital delay can have.
Pros:

- Generally sounds good anywhere in the chain (IME)
- Can be used for a very interesting digital delay that behaves in some ways liek an analog delay
- Beautiful sounding pitch shifting in mode 4
- Polyphonic shifting

Cons:

- You need to have a decent ear to dial in the added pitch in mode 4, or use the tuner output (does anyone actually do this?)
- Octave modes sound glitchy and are more of a special effect to me than a useable octave effect
- only one additional voice can be added to the dry signal
- mono out only

PS-3
Overall: I think this pretty much takes the cake as the most useable pitch shifter out there. The delay modes are great, clean and extremely versatile. It lacks the craziness and lo-fi quality of the PS-2, but it makes up for it with the ability to act as a basic looper. It produces excellent synth-like tones, sounds deep and wide in stereo, can do the whammy thing, and even has it's own craziness in mode-7, which can make a very nice reverb-like effect in addition to its more often mentioned uses. I love this pedal and it just might be my favorite of all Boss products. The only beef I have is the latency in a couple of the modes, but it doesn't diminish the effect too much in my eyes (and ears).

Pros:
- Has everything the PS-2 has and a lot more
- Excellent fidelity, very interesting digital delay that allows for some great looping applications
- All of the modes are useable, and the pitch shifted sound is very clean and pleasant sounding
- Dual modes to add 2 voices or even a detuend voice plus shifted signal to your dry tone
- Stereo out
- Exp control for very good "Whammy" effects
- Sounds good just about anywhere in the chain
- Polyphonic shifting

Cons:
- Latency! The shifted notes are delayed slightly which gives the effect sound a more processed and computery vibe than the PS-2 has (IME)
- Can be slightly diffcult to dial in the non-octave settings because the knob is a smooth type, as opposed to a multi-position rotary switch

HR-2
Overall: This is a cool, interesting pedal, but it really only does one thing with varying degrees of success, depending on the intervals selected. To me the HR-2 makes more sense as part of a suite of effects, like in a multi

effects unit, rather than a dedicated compact. It can work great for leads, but the set-up process can be pain-staking and it doesn't always work as intended. I think if it had incorporated a delay or just had a regular pitch shift mode in addition to the harmonist mode it would probably be amazing, and at least 1000x more useful (but they also had no less than 4 delay pedals and a pitch shifter in the lineup at the time so I get why this didn't have those things). The limitations of not being polyphonic (in all but a couple settings) and also having to stay strictly in a pre-determined key make this a tough pedal to justify really using at all. There is a special place in my heart for it though, despite all its shortcomings. It also represents, to me, the spirit of many of boss's efforts to "think outside the stomp box". As with all the PS series, the detune settings are beautiful (this one might have the best of all). Cool octave settings too.

Pros:
- Dual voice intelligent shifting in any combination of intervals one could want
- Excellent detune and octave settings
- Works great with synths
- Stereo Outs

Cons:
- Only has intelligent mode, which can limit your playing
- Your guitar must be tuned perfectly and also have excellent intonation for this pedal to really work well; finicky tracking
- Monophonic shifting (although in the octave settings chords can be played
- Very artifical sounding in a much more unpleasant way than the PS-2 and PS-3 (IMO)
- Very particular about placement

PS-5
Overall: By far my least favorite of the bunch. I find the harmonizer to track only slightly better than the HR-2 but has a much more unpleasant sound quality. There is no dual pitch shifting/harmonizing, no delay, and a couple modes that I would consider useless. There are players who have found great applications for the PS-5 but I just don't vibe with it! To me this pedal is the epitome of compromise. It's one pedal that does many things, just none particularly well. It also was produced during a time in Boss history where I find most of what they were doing to be pretty uninteresting and uninspiring.

Pros:
- Incorporates a little bit of everything that Boss had done with previous pitch devices (except delay) and packs a wide variety of sounds into a small pedal
- Has a great detune setting
- Stereo Outs
- Can be expression controlled
- The color is pretty

Cons:
- By far the most artificial and unconvincing effected sound
- Some superfluous modes that are kind of gimmicky
- NO MORE DUAL MODES!
- Tracking isn't much better than the HR-2
- Very particular about where it is placed in the chain

PS-6
Overall: I like this pedal a lot and use it on my board. It's not my favorite of the Boss PS series, but it is the easiest to use live, has a good sound, and isn't something I worry about getting swiped at shows unlike the PS-3, which is pretty coveted around here. They addressed a lot of my and others' beef with the PS-5 and really did a good job of making it a more user-friendly and versatile harmonizer than the HR-2 and PS-5. it still lacks a little in the sound-quality department (just kind of a character-less tone). It lacks the cool, pleasing tones of the PS-2 and PS-3, but it is a pretty good step forward from the PS-5. There is still room for improvement in what I hope will be a PS-7.

Pros:
- Improved tracking in the harmonizer mode, with a slightly higher quality sound than the PS-5
- Dual modes are back, albeit limited
- still has an excellent detune setting
- expression controllable
- stereo outs
- ability to get whammy type sounds without using an EXP pedal

Cons:
- Pitch shifted signal has a pronounced tremolo type of effect

- gets muddier with chords than the PS-2 and PS-3, not as "synthy" and cool sounding (IME)
- Seems to be a bit more particular about where it is placed in the chain, and it kind of seems to depend on which modes you want to use, so it can be a compromise if you like to use multiple modes
- Still lacks a lot of the appeal of the earliest PS pedals, where it just seems to be missing a lot of the "vibe" that makes those pedals classic

OK, Go!

Hexade

Re: Pitch Shifters

by **natthu** » 26 Jun 2017, 07:29

I have owned all the Boss PS/HR (and the OC series, which I think at least warrant a mention in this thread). I pretty much agree with your assessment.

The PS-3 is definitely my favourite of the lot. It's basically a double effect pedal with a couple of crossover modes which utilise both in an excellent way. My first PS-3 (which may actually have been my first pedal ever) got used more with my old drum machine than my guitar or bass. I found it had a bit of weird digital sound in some modes which lent itself well to industrial drum sounds. Plus some of the modes are just a lot of fun to tinker with and tweak while a drum machine is banging away through it. The expression pedal control is a big bonus too... I wouldn't use the PS-3 for guitar these days, as far as digital pedal go, it's pretty old tech. I have used more natural sounding non-Boss pedals to do the things I'd use it for, but I still have a PS-3 for sentimental reasons (incidentally, it's not the original one I had).

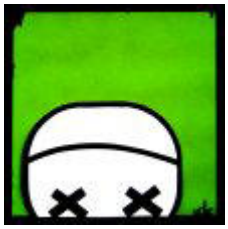
I also still have a PS-2. I know what you mean about it's lo-fi character, but aside from that I haven't found it to be very useful. Still, character goes a long way.

Although probably pioneering for their time, I never liked the PS-5 or HR-2. The main function of the PS-5, and the only one of the HR-2, are the in-key harmonizing which was never useful to my playing style at the time I owned them. The Flutter and T.Arm functions on the PS-5 are interesting and fun, but basically don't really amount to much more than a gimmick for me. I have since owned an Eventide PitchFactor which I believe does the harmonizing effect much better than any tiny little Boss pedal could be expected to. It's still not my thing though.

The PS-6 basically just does the harmonizing function you'd buy either the PS-5 or HR-2 for, but it does it much better (as you'd hope since it's newer).

The OC-2 is a great old school style Octave pedal. It's perfect for fattening up a bass guitar lines or adding a bass-in-a-box to a guitarist's arsenal. It's not polyphonic though, so unless you like glitchy chords, it's usefulness is fairly niche.

The OC-3 brings the function of the OC-2, but also adds a polyphonic mode to the table. Plus some drive which works okay with bass (I never tried it with guitar and no longer own an OC-3).



natthu

Re: Pitch Shifters

by **Dirk** » 26 Jun 2017, 18:38

I would like to add that the OC-3 will track down to a low D under E on a bass. The EBS octabass only tracks down to B on the A string for example.
I also like the Whammy feature of the PS-6, that's a lot of fun. But it's octave down tracks horrible.

Dirk

Re: Pitch Shifters

by **Franzoni** » 28 Jun 2017, 10:57

Only had the PS-6 which i bought mainly to use a a harmonizer and maybe the odd bit of whammy for fun but i found it way to gllitchy so i sold it and what i got for the pedal i was as able to buy a GT-8 secondhand which IMHO the harmonizer is a lot better and much more usable live.....it's still not great but in a band mix for a bit of simple harmonizing you can get away with it a lot better..i haven't really gotten around to using the whammy yet i must set up a patch and report back.....

Franzoni

Re: Pitch Shifters

by **The_Doc** » 28 Jun 2017, 15:19

I did toy with the idea of using a PS - 6 for the main solo in Bad Company's 'Can't Get Enough of Your Love'. I used it in a couple of rehearsals with the band going at full tilt and I could not get it to sound big enough - it just thinned out the guitar and we lost it in the mix, Tracking was fine. I can't even remember how I had it set up I just know it took a fair bit of fiddling before I was happy (ish).

I'm guessing I would have struggled no matter what because the original track had overdubbed guitars and non standard tunings which would have beefed it up.

In the end, given this song is the opener for that band, we decided to leave it as just one guitar with a healthily lashing of chorus. I don't think the audience could care less about an accurate tone so long as they feel moved to get up and boogie !

I've never done it but I'm sure these pitch shifters can be made to sound great in the studio where you have the time to set them up for recording but in the chaos on stage, for me, they haven't really worked.

The_Doc

Re: Pitch Shifters

by **charmonder** » 28 Jun 2017, 16:32

PS-3 is the ranking pitch shifter pedal.

> *Franzoni wrote:*
> *Only had the PS-6 which i bought mainly to use a a harmonizer and maybe the odd bit of whammy for fun but i found it way to gllitchy so i sold it and what i got for the pedal i was as able to buy a GT-8 secondhand which IMHO the harmonizer is a lot better and much more usable live.....it's still not great but in a band mix for a bit of simple harmonizing you can get away with it a lot better..i haven't really gotten around to using the whammy yet i must set up a patch and report back.....*

not to mention the user scales!

charmonder

Re: Pitch Shifters

by **charmonder** » 28 Jun 2017, 17:04

From what I understand by the GT pitch shifter's selectable modes, there are 2 approaches,

1:does not use/track the input pitch. is ok for perfect intervals, and works on chords BUT it comes with a tremolo effect. the GT has selectable slow/medium/fast for this, the tremolo is less distracting on the slow setting but there is more latency.
2:does track the input pitch. has better tuning/intonation, even fixes the tremolo BUT it freaks out on chords.

The PS-5/HR-2/PS-6 are obviously tracking the input pitch or else they wouldn't have harmony modes.

My guess is that the PS-2/PS-3 doesn't even track the pitch, which is why it is so difficult to tune anything other than fifths and octaves on the PS-2. and why you have only selectable intervals on the PS-3. but it is also why the effects still work further down the in the effect chain.

I have no idea what's up with the MO-2 it doesn't seem to have any of the disadvantages of the PS series.

I love this thread btw!

charmonder

Re: Pitch Shifters

by **Dirk** » 28 Jun 2017, 18:25

> *The_Doc wrote:*
> *In the end, given this song is the opener for that band, we decided to leave it as just one guitar with a healthily lashing of chorus. I don't think the audience could care less about an accurate tone so long as they feel moved to get up and boogie !*

I couldn't agree more. We never care for getting all the sounds 100% accurate, we just use what we have ourselves.
Usually as long as you have decent clean and dirty tones, and maybe a lead tone you'll get by as a guitar player, that's far more important than effects.

Audiences don't care, as long as they can dance to the music and drink beer.

Dirk

Re: Pitch Shifters

by **Franzoni** » 29 Jun 2017, 19:41

...

I have four main sounds these days...clean....clean with a bit of chorus,phaser,tremolo ...etc (depending on the song) crunch for dirty rhythm and lead ...

Even with the guitar synth i really only use about eight sounds and the main one is a hammond organ which i use about 70% of the time to fatten up the mix.....

Franzoni

Re: Pitch Shifters

by **Franzoni** » 29 Jun 2017, 19:43

> *The_Doc wrote:*

> *I did toy with the idea of using a PS - 6 for the main solo in Bad Company's 'Can't Get Enough of Your Love'. I used it in a couple of rehearsals with the band going at full tilt and I could not get it to sound big enough - it just thinned out the guitar and we lost it in the mix, Tracking was fine. I can't even remember how I had it set up I just know it took a fair bit of fiddling before I was happy (ish).*
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>
> *I've never done it but I'm sure these pitch shifters can be made to sound great in the studio where you have the time to set them up for recording but in the chaos on stage, for me, they haven't really worked.*

Yeah we have that Bad Company song in our set as well....

Gave up on the harmonizer as well and just use a bit of light delay with a couple of repeats to fatten out the lead part.....i found the harmonizer works ok on one or two of the Lizzy numbers but only to a point.....

Franzoni

Re: Pitch Shifters

by **Franzoni** » 29 Jun 2017, 19:47

> *charmonder wrote:*
> *PS-3 is the ranking pitch shifter pedal.*
>
> *...*
>
> *not to mention the user scales!*

To be honest i've only scratched the surface with the GT-8...i just set up what i needed and left it at that ...boring or what....?.... ...the main idea was to make life handy when switching between normal guitar sounds and the synth without a Fred Astaire routine where it excels....

Franzoni

Re: Pitch Shifters

by **The_Doc** » 29 Jun 2017, 21:21

Ah...we've got two guitarists for 'The Boys Are Back in Town' - much easier to programme two guitarists than a harmonizer

Nice idea about the delay on the Bad Co number - I will try that but I will give you credit Franz ... "the delay on the solo is for Franz".... that will get them all confused

The_Doc

Re: Pitch Shifters

by **Franzoni** » 30 Jun 2017, 22:52

Can't claim too much credit for using a bit of delay to fatten out a solo Doc.... a misspent childhood listening to people like Joe Walsh,David Gilmour and In the last few years Eric Johnson and Joe B.....

Yeah two players are great for harmony...the second band we started a couple of years ago was meant to be a six piece with keys and two guitars but it didn't work out unfortunately.....

Franzoni

Re: Pitch Shifters

by **Hexade** » 01 Jul 2017, 09:36

Seems like the PS-6 is pretty well-liked! I gotta say it's a pretty damn good pedal. I use the pitch shifter mode a lot for solos, since I pretty much have had the same experience others have mentioned with the harmonizer mode. I use the detune and S-Bend a bit too, but not for anything too radical. Haven't heard anyone step up for the PS-5 yet, which isn't surprising. Also, it seems like the PS-2 is more famous for it's delay function than the pitch shifter, which is pretty understandable.

Hexade

Re: Pitch Shifters

by **visserman** » 07 Jul 2017, 12:03

I do like the Pitch Shifting from the PS-2 over the sound of the PS-3 and PS-5 (not tried the PS-6 yet!)
All what you mentioned before I do share that view.
I find the PS-3 sounds a little gimmicky and digital. It's capabilities are fantastic, but how they sound are not so good.
Like the Detuning sounds from the PS-5.

I also do use a tuner for the PS-2, and it works well, but may not be a convenient thing for live applications.

The PS series may be interesting to see how things have developed over time. How many of them do sound natural? I will leave that question open. Maybe most of them are great for experimental sounds instead of just as a natural sounding Pitch Shifter?

visserman

Re: Pitch Shifters

by **Hexade** » 10 Jul 2017, 02:39

Yeah, the pitch shifter on the PS-2 has the best tone I think, followed by the PS-3.

Quick question about the major/minor positions on the PS-6 mode dial. Did Boss just separate the harmonizer mode into major/minor to make the pedal more user friendly? I mean (my music theory knowledge isn't that vast) aren't the intervals going to be the same in, say C major as they are in A minor?

For example: shouldn't I be able to play the minor modes of the C-major scale, regardless of whether the pedal is set to C major or A minor and still get the same effect as if I had the pedal set to A minor? Conversely, shouldn't I be able to play not only a C major scale, but other major modes CM/Am when the pedal is set to A minor?

I hope the question I'm asking is clear. I remember that the HR-2 and PS-5 left a lot of guitar players scratching their heads by requiring them to know not only the key they were using, but also the relative minor if they wanted to play minor scales. Did boss just attempt to remedy this by essentially making a mode for the minor keys so no knowledge of what major keys they relate to is necessary or am I missing something that would otherwise improve the functionality of the harmonizer mode on this pedal?

Hexade

Re: Pitch Shifters

by **charmonder** » 10 Jul 2017, 05:31

> *Hexade wrote:*
> *Yeah, the pitch shifter on the PS-2 has the best tone I think, followed by the PS-3.*

its always at the expense of precision though, is worth it in my opinion I like how the PS-2 does 5ths

> *Hexade wrote:*
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I think you're right this might be a redundant feature, then again.. I wonder if any curious behavior is hiding in how voices the "3voice" exactly

charmonder

Re: Pitch Shifters

by **Pepe** » 10 Jul 2017, 08:51

> *Hexade wrote:*
> *Did Boss just separate the harmonizer mode into major/minor to make the pedal more user friendly? I mean (my music theory knowledge isn't that vast) aren't the intervals going to be the same in, say C major as they are in A minor?*

I met "musicians" who cannot transpose two semi-tones up. And I'm not talking about simultaneous transposing - they have trouble writing down transposed chords of a song on paper on their own, although they play their instrument for 15 years!

Pepe

Re: Pitch Shifters

by **Gasgano** » 10 Jul 2017, 16:38

Agreed with Pepe. Most likely did that for ease of use.

For example, the The VE-2 (Vocal) doesn't have the "minor/major" knob, you have to know the major equivalent to a minor chord (which is not rocket science, but still requires a certain knowledge of scales).

I could use it myself without it, but cool feature when you want to change quickly though.

Gasgano