Subject: How to achieve Stereo Native Auxes - step by step
Posted by kerryg on Tue, 02 Mar 2010 22:13:51 GMT
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I thought I'd give this its own topic header in case anyone missed it in the Native Submix thread. drfrankencopter has now posted a truly excellent step-by-step tutorial on achieving stereo native auxes in PARIS - it's brilliant, and completely easy to follow, with comprehensive screenshots. Enjoy!

Subject: Re: How to achieve Stereo Native Auxes - step by step
Posted by Ted Gerber on Wed, 03 Mar 2010 12:05:42 GMT
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These are very detailed instructions. Looking forward to trying it out.

Still wondering in advance if you can send more than a stereo pair from the card submix to the same stereo "in" of the Native submix. ie: like a whole drum kit, or background vox group etc. And if so, would they each be returned to the Insert slot from which they were sent, or could you return them elsewhere on the card submix (assuming open tracks)?

Sorry to be a bit dense, I'm just jumping to a key question, without exploring it first myself...

Ted

Subject: Re: How to achieve Stereo Native Auxes - step by step
Posted by drfrankencopter on Wed, 03 Mar 2010 14:43:41 GMT
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Ted, to answer your questions:

1. 'wondering in advance if you can send more than a stereo pair from the card submix to the same stereo "in" of the Native submix. ie: like a whole drum kit, or background vox group etc.'

Yes...to my knowledge this is possible. The when Senderella is set to be a 'return' it will sum all the sends that are set to that channel.

2. if so, would they each be returned to the Insert slot from which they were sent, or could you return them elsewhere on the card submix (assuming open tracks)?

I've only experimented with returning to open tracks. I used native submixes for this as it made sense for FX returns. But, I could envision situations where you might want to put the source tracks on native submixes and return them to EDS submixes. An example here could be grouping a bunch of background vocals and having them return on a pair of channels in an EDS submix.

The only gottcha is that the Senderella send is pre-fader so you can't do automation on the sends, only the returns. This is something I think could be addressed by reading the EDS mixer state, or through Midi automation.

I've also thought of another use for Senderella. I haven't tried it, but perhaps it could be used to create interesting delay based FX. Imagine an insert chain consisting of (top to bottom):
- Senderella return (from sends in another mix)
- A second Senderella return (with pass through...linked to the output of the delay line)
- Digital delay set to no-feedback
- Phaser, Filter, or Some other kind of modulation
- Senderella send back to the return above

Now you have a delay with phasing/filtering/tape saturation, you name it, in the feedback loop. It's like a modular synth for delays.

Cheers

Kris

Subject: Re: How to achieve Stereo Native Auxes - step by step
Posted by Ted Gerber on Wed, 03 Mar 2010 21:08:52 GMT
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Alright - thanks for the input!

Subject: Re: How to achieve Stereo Native Auxes - step by step
Posted by dnafe on Wed, 03 Mar 2010 23:06:42 GMT
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As I don't have Senderella installed yet it's dumb Q time again

Just under the black bar in Senderella is a "(send#1)"

Am I correct in assuming this is user adjustable from 1 - 64 depending on the number of instances of Senderella you have open?

Subject: Re: How to achieve Stereo Native Auxes - step by step
Posted by thesandbox1 on Wed, 03 Mar 2010 23:09:57 GMT
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"and also a means to do latency compensation on the pass-thu path of the sends, which should allow for parallel compression in Paris." to do this from one card to another or native would be great!

Subject: Re: How to achieve Stereo Native Auxes - step by step
Posted by drfrankencopter on Thu, 04 Mar 2010 13:16:41 GMT
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dnafe wrote on Wed, 03 March 2010 15:06As I don't have Senderella installed yet it's dumb Q time again

Just under the black bar in Senderella is a "(send#1)"

Am I correct in assuming this is user adjustable from 1 - 64 depending on the number of instances of Senderella you have open?

To be quite honest, I'm not sure what that is. I think it's a preset that shows up in the FXPansion wrapper format, but without Paris in front of me I can't say for sure. The only controls in Senderella that I played with are the ones in the green area starting with Channel.

In paris Senderella can create 64 mono virtual auxes, and the channel simply indicates what return the signal is summed at.

I've got some more experimenting to do, but I think I may have found a way to get group aux send automation in paris by using Senderella on the native submix FX Auxes. I'll save that tutorial for later.

Cheers

K

Subject: Re: How to achieve Stereo Native Auxes - step by step
Posted by dnafe on Thu, 04 Mar 2010 17:58:37 GMT
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Great job Kris!

Subject: Re: How to achieve Stereo Native Auxes - step by step

Posted by mani1147 on Thu, 04 Mar 2010 22:11:45 GMT
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This is to cool Kris, thanks a bunch.

PS: So your new P55-UD3L MOBO is working ok, I think I have a bit of a IRQ conflict happening with my 3rd EDS and my UAD-1 PCI, seems they are both fighting for bandwidth on IRQ 19. At 50% UAD load, Paris will just stop playback with the streaming error and the UAD card will disappear from the UAD ctrl panel(no card detected), need to reboot pc to get UAD back. I think I have to switch over to "Standard PC" instead of ACPI and then manually assign some IRQs if I can, hope this works.

Chow
Rob_A

Subject: Re: How to achieve Stereo Native Auxes - step by step
Posted by drfrankencopter on Fri, 05 Mar 2010 13:51:05 GMT
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So far, so good on the Mobo, but I haven't stress tested it. Also, I opted not to put the UAD-1 back in. Too many headaches with advancing tracks, or deleting time.

The only issue I've been running into is an occasional crash on exit. That, and the Soundtoys plug-ins I'm demoing generate a 'ticking' sound (I tried them wrapped into Direct-x, as VSTs, and with Chainer, and the behavior is the same. This only happens in Paris, and it doesn't matter how many tracks I have going at the same time. Too bad...they sound good in Wavelab. I wonder if Paris.cfg settings could affect that. Maybe I need to set the EDSTransfer value to something.

Does anyone have the scoop on what the various settings in the paris config file do?

Cheers

Kris

Subject: Re: How to achieve Stereo Native Auxes - step by step
Posted by kerryg on Sat, 06 Mar 2010 03:08:41 GMT
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I created a "stub" page to collect configuration info on the Wiki but it's not too well populated yet. There's lots to be gleaned from artguy Steve's collection and John B's notes, I hope to eventually collect 'em in one place.

Subject: Re: How to achieve Stereo Native Auxes - step by step
Posted by kerryg on Sat, 06 Mar 2010 09:24:23 GMT

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I just stumbled across (another) big gap in my understanding - this needs plugins to be *wrapped*, right?

I've never done that before - am I wrapping DX plugins so the "present" to PARIS as VSTs? Or is it the other way around? I downloaded the FXpansion 3.3 wrapper from the ParisFAQs site -it seems to be made to wrap VSTs as DXs, so far so good?

Subject: Re: How to achieve Stereo Native Auxes - step by step
Posted by drfrankencopter on Sat, 06 Mar 2010 13:43:37 GMT
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Senderella is a VST. You should be able to drop it in your paris VST directory and have it work (provided you don't mind the ugly brown interface that paris adds to vst's). Me, I just used it a wrapped direct-x using FXpansion.

Cheers

Kris

Subject: Re: How to achieve Stereo Native Auxes - step by step
Posted by kerryg on Sat, 06 Mar 2010 19:38:31 GMT
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Senderella acts pretty strange here as a VST - it has gibberish as values and won't save presets (not that this is a big deal given the limited parameters). I'll try it wrapped.

OK, took some more steps towards documenting what's known about the Paris.cfg over here.

Subject: Re: How to achieve Stereo Native Auxes - step by step
Posted by drfrankencopter on Sat, 06 Mar 2010 20:14:50 GMT
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Senderella has no gui itself, so it uses the host's gui...which I guess doesn't work so well in Paris.

I haven't tried saving a project with Senderella yet. So you're ahead of me there.

Regarding Paris config files, the things I'm most interested in are PreQFactor and EDSTransfer....what do these actually do?

Cheers

Kris

Subject: Re: How to achieve Stereo Native Auxes - step by step
Posted by kerryg on Sat, 06 Mar 2010 22:19:30 GMT
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I just added a section on EDSTransfer culled from forum info (chiefly from Dimitrios); have a look at the foot of the Wiki config page. Still looking for PreQFactor info.

OK, collected up some sketchy info on PreQFactor there as well. Pretty meagre so far though, anyone got more?

Subject: Re: How to achieve Stereo Native Auxes - step by step
Posted by kerryg on Mon, 08 Mar 2010 18:54:04 GMT
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OK, got SIR to show up and routed to it - it works! Pretty darned cool!

I'm experiencing some issues right now that might be related to my struggles with figuring out wrappers et al. I'm experiencing apparently fluctuating latency with this chain - audio routed through it seems to have audibly fluctuating latency. It almost seems like the clock that steadies the stream (is there one?) is "wobbling" - the audio received itself is almost "inconsistently vari-speeded". I've experimented with EDSTransfer=8,16, couldn't really hear a big change - I might need to clean out the plugin folder and simplify.

If you're getting a steady latency (or no latency) on your system then it's likely to be a configuration issue on this end since I'm delving into all this stuff for the first time.

Subject: Re: How to achieve Stereo Native Auxes - step by step
Posted by drfrankencopter on Mon, 08 Mar 2010 20:00:27 GMT
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Kerry, have you tried bypassing SIR? Is the problem with Senderella (and the wrapper function), or SIR?

Interestingly enough, I think the problems that I was having with SoundToys plugins may have been related to variable buffer sizes or odd length buffer sizes. What I ended up getting on those plugins was audio that clicked whenever sound was present. Apparently, in FL studio in order to get these plugins to work you need to set "Fixed buffer sizes", and in Ableton Live you need to set it to an even buffer length:

http://www.gearslutz.com/board/electronic-music-instruments-electronic-music-production/455889-issues-soundtoys-live-8-a .html

In Paris, I don't think we have any chance of changing the buffer length. Unless there's a hidden setting in the .cfg file that can affect this. Perhaps I'll learn more as I dig deeper into VST programming.

Cheers

Kris

Subject: Re: How to achieve Stereo Native Auxes - step by step
Posted by kerryg on Mon, 08 Mar 2010 20:04:26 GMT
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Gotcha. I'll check a broader range of plugs. Don't know about "fixed buffer sizes" being something we can get at, Mike would know more about that. I dug up some more stuff about EDSTransfer from Steve's site including some interesting input from Edmund (it seems the first number, the one before the comma, is suggested to be 1/4 your chosen disk I/O), check the Wiki page.

Subject: Re: How to achieve Stereo Native Auxes - step by step
Posted by drfrankencopter on Mon, 08 Mar 2010 20:23:39 GMT
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I sent off an email to intdevices support....we'll see if there's any response. I was looking for clarification on the un-documented config file settings.

I think Paris' VST behaviour is handled in a separate dll. I asked for the source for it, figuring it wouldn't be valuable IP considering the age of the product and the fact that the VST standard has evolved a bit in 10 years. Again, we'll see...

I'm not holding my breath.

Cheers

Kris

Subject: Re: How to achieve Stereo Native Auxes - step by step
Posted by kerryg on Tue, 09 Mar 2010 01:51:17 GMT
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drfrankencopter wrote on Mon, 08 March 2010 12:00Kerry, have you tried bypassing SIR? Is the problem with Senderella (and the wrapper function), or SIR?

Interestingly enough, I think the problems that I was having with SoundToys plugins may have been related to variable buffer sizes or odd length buffer sizes. What I ended up getting on those plugins was audio that clicked whenever sound was present. Apparently, in FL studio in order to get these plugins to work you need to set "Fixed buffer sizes", and in Ableton Live you need to set it to an even buffer length:

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electronic-music-production/455889-issues-soundtoys-live-8-a .html

In Paris, I don't think we have any chance of changing the buffer length. Unless there's a hidden setting in the .cfg file that can affect this. Perhaps I'll learn more as I dig deeper into VST programming.

Cheers

Kris

I disabled SIR and the "skiddy buffer" effect persists, even with a new song and new tracks. It's either Senderella or what I wrapped it in, or it's something in my system. Can't shake it with settings either. But that's actually pretty good news though - the audio routing itself is working perfectly well, so since we *have* the source code for Senderella it might just be a matter of tweaking it for use in PARIS and maybe "toughening it up" for robustness. Do you think it's a matter of "forcing" the buffers to match what the PARIS FX system expects, or is it a lot more than that?

PS: as time permits I'll get some links up to a couple of other cool PARIS-related things we have source code for - maybe a couple of "no longer supporteds" we might be able to ask if we can adopt too. Not meaning to rope you into anything, but maybe there's other code folk out there in the community as well that might be interested in small, focused projects with potentially cool advances waiting at the end.

Subject: Re: How to achieve Stereo Native Auxes - step by step
Posted by drfrankencopter on Tue, 09 Mar 2010 13:43:10 GMT
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I don't recall getting any kind of vari-speed effect. I used FXPansion's wrapper on my system.

Have you tried senderella as a regular VST installed into Paris' vst directory? This would rule out the wrapper. Also, which senderella are you using? I'll need to check the version # that I installed, but I think it's 1.06 and I opted to use the original interface version instead of the simpler one.

Cheers

Kris

Subject: Re: How to achieve Stereo Native Auxes - step by step
Posted by drfrankencopter on Fri, 12 Mar 2010 02:30:15 GMT
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Kerry,

I managed to hear the problem with Senderella too. I loaded up a session, solo'd the Senderella

returns, while the sends were coming from a vocal and heard a sort of 'stutter' effect.

For me, setting EDSTransfer=8,16 or EDSTransfer=8,8 made the problem go away. I suspect that EDSTransfer=8,8 was better, but I wasn't really scientific in my testing. I did remove the EDSTransfer line, and the stuttering came back.

Next I will try using a smaller disk I/O size, as I had a smaller size when I first experimented with Senderella and didn't notice the problem. However, truth be told since my send source was a snare drum maybe it was there and I just didn't notice.

Oh, and I tried it with Senderella as a Paris VST, FXpansion wrapped, and in Chainer...its behaviour was the same with all three.

I'll try the disk I/O experiment tomorrow. I noticed that paris' meters are slower with 128 K I/O...especially in the native submixes.

Cheers

Kris

PS: I tried polarity inverting the channel with the Senderella send's, and while I didn't get a perfect null, it was only high frequencies that remained. I suspect there is a delay of a few samples (not sure if it's the EDS submix delay, or Senderella's delay...but I suspect the EDS submix, as it was submix 2 I was sending from).

Subject: Re: How to achieve Stereo Native Auxes - step by step
Posted by kerryg on Fri, 12 Mar 2010 03:03:49 GMT
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Quote:For me, setting EDSTransfer=8,16 or EDSTransfer=8,8 made the problem go away. I suspect that EDSTransfer=8,8 was better, but I wasn't really scientific in my testing. I did remove the EDSTransfer line, and the stuttering came back.

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I'll try the disk I/O experiment tomorrow. I noticed that paris' meters are slower with 128 K I/O...especially in the native submixes.

I really want to get the interactions between configuration settings mapped out. I'd love to make an interactive calculator that one could plug a desired outcome into and it would suggest optimal settings.

Dimitrios has some absolutely killer posts about these sort of issues, he did a ton of pioneering on this topic. Some of these may be useful:

Aux channels compression

Paris Workarounds Update

Did you see that Wormhole has gone open source? That's pretty exciting stuff.

Subject: Re: How to achieve Stereo Native Auxes - step by step
Posted by drfrankencopter on Fri, 12 Mar 2010 03:16:33 GMT
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Yeah, I saw that about Wormhole....I tried it, but the latency was huge. I just couldn't make it work with a reasonable value.

Cheers

Kris
