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Couse Delay block feedback loop

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Couse Delay block feedback loop (#p2915)

by **PelicanNoiseWorks** » Mon Feb 06, 2017 3:41 pm

Hello everyone, first time posting in here. I've been playing with SpinCad today and am blown away by how cool this is. Nice work on this! I'm having some trouble understanding how feedback loops connect in delay lines.

Say I wanted a lowpass filter in feedback loop of the course delay. How would this connect? I assume there would have to be a 2:1 mixer and a loop added from the 'loop' menu along with a control added to control the mixer? That's my best guess at this point. My noob brain is having trouble figuring out how this would all connect.

Any help would be greatly appreciated. Thanks!

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Re: Couse Delay block feedback loop (#p2916)

by **Digital Larry** » Mon Feb 06, 2017 4:46 pm

To add a feedback loop, go to "Loop" on the menu, upper left and select "Add". It's a special bit of code because it drops in 2 blocks, the loop in and out. The loop "In" block has a control panel where you can set the gain. It allows negative gains to be set which implies a phase flip. This is not usually audible for delays but using a really short delay like the servo delay in flanger range, you will hear the difference there.

And I hope the rest of it is self explanatory. As you say, you can make a feedback loop using a 2-1 mixer in front of the delay block. The low pass filter can go anywhere in the loop - either between the delay output and loop input, or between the loop output and mixer input. The delay blocks which already have a feedback input defined simply have the 2-1 mixer built into the code.

Finally, yes you control the feedback level by hooking a control to the mixer channel corresponding to the feedback signal.

Any block with a control panel has a white outline. Right click on a block to get a menu where you can open the control panel if it has one.

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Re: Couse Delay block feedback loop (#p2918)

by **PelicanNoiseWorks** » Mon Feb 06, 2017 6:13 pm

Thank you so much, you rock!

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Re: Couse Delay block feedback loop (#p2919)

by **PelicanNoiseWorks** » Thu Feb 09, 2017 1:48 pm

Another question about delays in the most recent build. When changing delay times, I'm getting a very audible glitch/scratchy sound. I've tried a smoother in between the pot and the delay control input at various different values across the spectrum. This makes it better but it still seems very noisy to me. Any other ideas of things to try? I've tried with just about all the delay blocks and have the same issue. Maybe I'm missing

something. Any thoughts?

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Re: Cause Delay block feedback loop (#p2920)

by **Digital Larry** » Thu Feb 09, 2017 3:26 pm

If you make the read pointer jump abruptly then you will get glitches no matter what. There is a way that some people do it where you have two delay taps defined, and when you change the delay time, you set the delay time of the new tap and THEN you fade to it from the old tap position. So in that case you would avoid glitches and also pitch bending from delay time changes. If somebody has Spin ASM for a delay done this way, I could make it into a block.

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Re: Cause Delay block feedback loop (#p2921)

by **PelicanNoiseWorks** » Thu Feb 09, 2017 5:06 pm

Is it normal for even slight slow turns if the delay time pot cause glitches and scratchy sounds? I love the pitch bending sounds and definitely don't want to get rid of that. Just for it to smooth out.

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Re: Cause Delay block feedback loop (#p2922)

by **Digital Larry** » Thu Feb 09, 2017 6:30 pm

I use the three-tap delay block most of the time. If you don't connect taps 2 and 3 no code is generated for those taps so it's good as a universal delay block. In my experience, no, there is not a lot of noise and scratchy sound when controlling the delay time with a pot. I also almost always use a smoother on the delay time. So I'm not sure what is going on. If you like, you can send me a PM with your patch or Spin ASM code attached and I can take a look at it.

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Re: Cause Delay block feedback loop (#p2923)

by **PelicanNoiseWorks** » Thu Feb 09, 2017 6:56 pm

I'll give the three tap block a go and see if it is any different noise-wise. That's good to know that taps 2 & 3 if left connected don't do anything. Thanks for your help, ill report back with my findings.

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