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## Extending the adjustable reverb time
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### Extending the adjustable reverb time (#p2130)
by **rawker999** » Mon Feb 16, 2015 2:26 pm

Hey guys,

So I have a setup with the adjustable reverb, there is a pot controlling the reverb time. Even with the pot at 10 I find myself wanting the decay to be much longer.
Is there anyway I can make the decay on the reverb much longer? Ive tried running multiple reverbs but the chip cant handle it.

Thank You,
Jon

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### Re: Extending the adjustable reverb time (#p2131)
by **Digital Larry** » Mon Feb 16, 2015 2:36 pm

Hmmm. I'll have to take a look at it. By comparison to Spin's reference reverbs, could you pick out one which has more of the sound that you're looking for?

The adjustable reverb block is essentially a decomposed Spin reverb, so I didn't invent anything new there. At the same time, I may have done something with some Scale/Offsets.

What settings did you use within the block itself? Typically (other than the filtering settings) I would turn everything up. Max all-passes, max delay lines. Turn the all-pass parameters up higher, but be careful about howling (which is very unpleasant). Control panel settings don't adjust in real time (if you're using the simulator). Stop and restart the simulator to hear any control panel changes.

Thx,

DL

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### Re: Extending the adjustable reverb time (#p2132)
by **rawker999** » Mon Feb 16, 2015 2:56 pm

I have everything up with the pass parameters up a little on the block. Once im back home ill mess with those pass parameters more and possibly look into the actual code.

Thanks Larry

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## Re: Extending the adjustable reverb time (#p2134)
by **rawker999** » Mon Feb 16, 2015 10:48 pm

Even with everything maxed on the block its not much longer then what i already had. I will begin looking into the assembly tomorrow.

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## Re: Extending the adjustable reverb time (#p2135)
by **Digital Larry** » Tue Feb 17, 2015 7:16 am

All right. My suggestion, if you are willing to spend a little time helping out, is to compare it to whatever Spin reverb algorithm you find the most awesome.

I'm not a big fan of huge long reverb other than occasional goofing around, so for sure I have not tested this block extensively.

The structure of most Spin reverbs is something like this:

4 cascaded all passes - I see KB added "diffusion control" here which is an adjustment to the WRAP parameter
into a reverb ring, with 1, 2 or 4 delay lines. Gain of signal going in here is controlled to give "reverb time"
Sometimes those reverb rings have filtering inline, sometimes they don't (WRHX, WRLX)
Sometimes, multiple taps within the reverb ring are summed to give the reverb output.
Sometimes, slow chorusing is use for reverb "smoothing"

I don't remember which algorithm was used as the basis for this block, but I did it fairly quickly.

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## Re: Extending the adjustable reverb time (#p2136)
by **rawker999** » Tue Feb 17, 2015 7:19 am

Sure no problem!
As of right now I don't know any assembly, but I plan on making reverbs so I will put in the time to learn.

I will give you as much info as I possibly can to help,

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## Re: Extending the adjustable reverb time (#p2137)
by **Digital Larry** » Tue Feb 17, 2015 7:36 am

Hey that's great, I do appreciate it.

My goal, even if I didn't hit it straight out, is to look at all the available reverb patches and come up with a simplified way to get close to all of them by selecting some parameters in a control panel. At a certain point this becomes ridiculous, because you can choose 4 all pass lengths and 4 delay line lengths, filtering coefficients, blah blah blah, and the control panel becomes so huge and interactions so complicated that I'd recommend just doing it right in Spin ASM.

But I do think that it's important to identify the known best long, smooth reverb we can find and have that be one of the possibilities even if I don't offer adjustment of every single thing in it.

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## Re: Extending the adjustable reverb time (#p2138)
by **rawker999** » Tue Feb 17, 2015 8:11 am

Yeah absolutely,

From what I've been able to get out of reverb block in spinCAD is awesome. It definitely covers a good amount of ground encompassing average reverbs.

I'm into ambient music so what I'm trying to do is create a very spacious reverb that decays slowly, not very beneficial to everyone I'll admit.
It's definitely possibly, there is a pedal on the market that utilizes the FV-1 and EEPROM to achieve up to 30 seconds of decay.
When I figure this out you'll be the first to know

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