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Through zero flangers

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Through zero flangers (#p2219)

by **Digital Larry** » Fri Mar 27, 2015 2:02 am

I finally figured out that much of the magic requires one of the delay lines to be inverted so that they fully cancel when they line up.

I'm sure there's more that could be done here. Play with the LFO width (shorter seems better), the servo gain, tap ratio, and LFO speed (slower seems better for bringing out the drama of the TZF).

Attachments

[through-zero-flangers-demo.zip \(./download/file.php?id=175\)](#)

(4.26 KiB) Downloaded 95 times

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Re: Through zero flangers (#p2220)

by **disasterarea** » Fri Mar 27, 2015 5:31 am

Nice patch! I agree that adjusting the offset for the tap will help deepen the TZF point. Also, a triangle wave oscillator helps with the "feel" of the flanger, ideally we want to have very quick turnaround at the endpoints. I've tried sine, hypertriangular, you name it, but the triangle wave gives the best classic flange sound for my money. That means you'll need to implement an actual servo delay because you can't use a CHO RDA to sweep the delay line, 🙄 The flanger you have now makes a great vibrato, btw, sine sounds perfect for that.

Here's a fun flanger trick:

Use a SOF to process the POT input that you use to MULX the feedback input.

```
ldax pot2 ; read pot
sof -1.99, 0.99 ; change response to -1 to +1
wrax potinvert, 0.0 ; store in temp register for mulx later
rdax feedback, 1.0 ; read in last used feedback value
mulx potinvert ; now mulx by feedback pot, if negative the phase inverts!
wrax nextreg, 0.0 ; do whatever you want with the feedback now.
```

If you do this in the simulator the results are a bit different than hardware but the inverted side sounds the same so it's a good test. Negative feedback on a flanger gives a way more "hollow" and "tunnel" like sound. I've tried it on a phaser but it's not as effective.

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Re: Through zero flangers (#p2221)

by **Digital Larry** » Fri Mar 27, 2015 5:37 am

So, if I get you correctly, you'd like to see a real servo delay block? Where have I heard that before?
hmmm 😊

Thx for the cool feedback phase trick!

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Re: Through zero flangers (#p2222)

by **disasterarea** » Fri Mar 27, 2015 6:22 am

Digital Larry wrote:

So, if I get you correctly, you'd like to see a real servo delay block? Where have I heard that before? hmmm 😊

😊 LOL, yes. Controlling a moving delay by any other means is a recipe for disaster. Be sure to allow for extra gain in the servo!

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Re: Through zero flangers (#p3135)

by **lutop** » Sun May 06, 2018 12:56 pm

the TZF zip file seems to be corrupted... do you happen to have a not corrupted copy somewhere?

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Re: Through zero flangers (#p3136)

by **Digital Larry** » Wed May 09, 2018 7:37 pm

I updated the file for you.



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Re: Through zero flangers (#p3148)

by **lutop** » Wed May 30, 2018 10:41 am

Thanks!

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