

Holy City Audio Forum

Former Home of SpinCAD Designer

[Skip to content](#)

Search...

[Advanced search](#)

[Moderator Control Panel]

Creating Effects From Scratch - Pt. 1 Tremolo

Post a reply

Search this topic...

2 posts • Page **1** of **1**

- [Edit post](#) (./posting.php?mode=edit&f=32&p=1599)
- [Delete post](#) (./posting.php?mode=delete&f=32&p=1599)
- [Report this post](#) (./report.php?f=32&p=1599)
- [Warn user](#) (./mcp.php?i=warn&mode=warn_post&f=32&p=1599&sid=90615c931909e0633cbcd2a3573379b1)
- [Information](#) (./mcp.php?i=main&mode=post_details&f=32&p=1599&sid=90615c931909e0633cbcd2a3573379b1)
- [Reply with quote](#) (./posting.php?mode=quote&f=32&p=1599)

Creating Effects From Scratch - Pt. 1 Tremolo (#p1599)

by **disasterarea** » Tue Jun 03, 2014 7:39 am

A big part of my interest in the FV-1 and SpinCAD Designer is the ability to create effects without using "canned" or pre-configured effects blocks. Ultimately this is more difficult but the end result can be tweaked a lot more. It's really easy to change some numbers in the factory programs or to chain together a bunch of blocks but I wasn't interested in that approach.

This is the first of a series of posts about creating effects from scratch. All patches are created with the latest beta version of SPCD, and rather than posting the binary files I'll post an image of SPCD as I am creating the patch.

Here's the first one, a simple tremolo. POT0 controls the LFO rate and POT1 controls the depth.

Image

Let's follow it through along both signal flows - audio and control.

Audio: Very simply input goes through a volume block to output.

Control: POT0 -> Scale / Offset -> LFO0 -> Volume control input -> Scale / Offset -> Audio volume control input.

POT1 -> LFO volume control input.

There are two SOF (Scale / Offset) blocks. The first makes POT0 range from 0.04 to 0.3. We don't want the rate of LFO0 to be zero, and we don't want it in the audio band because that's a ring modulator!

The second SOF block inverts the range of the LFO, for reasons we'll get to in a minute.

LFO is set to the maximum amplitude. We'll decrease this with the control volume block. We need to use the COS oscillator, not SIN.

Both volume blocks are set to a gain of 1.00. We're controlling them externally so we don't need to reduce this further.

And that's the whole thing. Take a minute to simulate or flash this and give it a whirl.

The second SOF block is important, because what we want is for the audio volume to be at maximum if POT1 is at minimum. We want peaks of the LFO to *decrease* the volume. If you leave the SOF block out here, you'll get tremolo but the audio will be muted with the depth / POT1 at minimum.

Mods to this? Sure, no problem. Obviously you can change the LFO rate by tweaking the first SOF block. You could make the LFO a square-ish wave by putting a Distortion or Overdrive block between the LFO and the control volume input. You could swap the audio volume block out for a filter for a pulsating wah. Lots of options here, I just wanted to show that you're not limited to the blocks that Larry has included. He's awesome but he can't think of everything.

Comments? Questions? Post 'em here.

Top

- [Edit post](#) (./posting.php?mode=edit&f=32&p=1601)
- [Delete post](#) (./posting.php?mode=delete&f=32&p=1601)
- [Report this post](#) (./report.php?f=32&p=1601)
- [Information](#) (./mcp.php?i=main&mode=post_details&f=32&p=1601&sid=90615c931909e0633cbcd2a3573379b1)
- [Reply with quote](#) (./posting.php?mode=quote&f=32&p=1601)

Re: Creating Effects From Scratch - Pt. 1 Tremolo (#p1601)

by **Digital Larry** » Tue Jun 03, 2014 7:56 am

Thanks for putting in the effort! Looks like my Forum SW clips off the right hand side of the image but if you right click and download it it's all there. [Update: Using a nice wide screen helps with this problem].

Makes me think I should add an "Amplitude" control input to the LFO block.

Top

Display posts from previous:	All posts	Sort by	Post time	Ascending	Go
------------------------------	-----------	---------	-----------	-----------	----

Post a reply

2 posts • Page **1** of **1**

[Return to Installing and Using SpinCAD Designer](#)

Jump to:	Installing and Using SpinCAD Designer	Go
----------	---	----

Quick-mod tools:	Lock topic	Go
------------------	----------------------------	----

Who is online

Users browsing this forum: [Digital Larry](#) and 0 guests

Powered by phpBB® Forum Software © phpBB Group

[Administration Control Panel](#)